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The American Artisan
And Hardware Record

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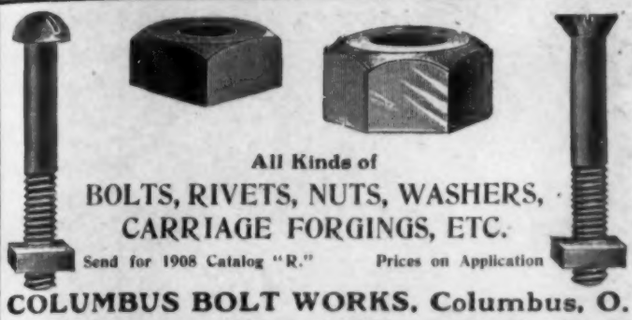


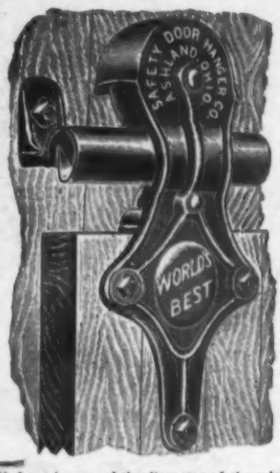
All Kinds of
BOLTS, RIVETS, NUTS, WASHERS, CARRIAGE FORGINGS, ETC.
Send for 1908 Catalog "R." Prices on Application
COLUMBUS BOLT WORKS, Columbus, O.

GET THE LIVE LINE
"AMERICAN SEAL"
Elastic Oil Roofing Cement, Stove Putty and Asbestos Furnace Cement
For Furnaces, Stoves, Ranges and Roofs.
Jobbers write to-day for prices
THE
Wm. Connors Paint Mfg. Co.
Makers. TROY, N. Y.
Western Agents: Friedley-Voshardt Co., 194 Mather St., Chicago, Ill.
Southwestern Agents: Stockhoff Supply Co., 107 N. Main St., St. Louis, Mo.

Trying to do business without advertising is like winking at a girl in the dark; you know what you are doing but nobody else does.

MATCHLESS
Spring and Pivot Hinges
Floor Hinges, Jamb Hinges and Hardware Specialties.
The fact that Matchless Spring Hinges have been on the market since 1895 and that in that time not one set has required repairs from fault of hinge speaks very well for their serviceability and wearing qualities.
If your Jobber cannot furnish them write us.
LAWSON MFG. CO.
40 Dearborn St., Chicago, Ill.

NEW DESIGN WORLD'S BEST
TUBULAR TRACK DOOR HANGER



We have increased the diameter of the wheel to 2¾ in., making it the easiest running Hanger on the market.
The supplementary wheel prevents derailment. Frame is made of the best grade malleable iron. Finished in Aluminum and each pair packed in an individual box, complete with bolts. The track brackets are slidable and may be placed at any point desired. We do not sell catalog houses. Write for prices.
SAFETY DOOR HANGER CO.
Manufacturers
Ashland, Ohio Hamilton, Ont., Can.

"NEVER-BREAK"
TRADE MARK

Catalog Free
"NEVER-BREAK"
STEEL SPIDERS, GRIDDLES AND KETTLES
WILL NOT Scale Off like cheap enamel.
WILL NOT Scorch or Burn like light fry pans and skillets.
WILL NOT Absorb Grease or Flavors like cast Iron.
THE AVERY STAMPING CO.
CLEVELAND, OHIO
Sole Manufacturers
"NEVER-BREAK" Goods

DELTA
FILES OF QUALITY
CARVER FILE CO., Philadelphia, Pa.
An independent organization not connected with the trust in any form, shape or manner.
To keep up the sales, keep up the quality.
TRADE MARK DELTA
FILES

PULLMAN
SASH BALANCES

Are you selling them?
IN USE EVERYWHERE
Send us your orders
PULLMAN MFG. COMPANY
SOPHIA STREET
ROCHESTER, N. Y., U. S. A

Porcelain Enamel Formulas
Any kind or color, for cast iron and sheet steel, with full instructions.
Start new—and improve quality of ware in old plants.
34 Years' Practical Experience
JOHN PEIL, Columbus, O.

100 Tinners' Patterns
Complete for
$1.00
Sent Postpaid on Receipt of Price
Daniel Stern
355 Dearborn Street - Chicago

Pot-Luck with Mark Antony

With Apologies to Kelly of Springfield.

Mark Antony was one of the "High Rollers" of Ancient Rome.

It is said that a "Feed for a few friends" at his summer place often cost 1,000 Simoleons.

It was a favorite trick of Mark's friends to stop him in the Forum and beg to be taken home to dinner, hoping to catch him some day when they had nothing but warmed up potatoes and cold meat.

"Take me out to dinner, Tony," said Lepidus one day. "No fuss, I just want to take pot-luck."

Mark telephoned right out, before Lepidus, and simply said: "Serve dinner for two in the Good Luck Gallery."

The place was decorated with Cleopatra carnations and the dinner cost 125 Simoleons per plate.

The secret was in the words Good Luck.

Mark had an understanding with his Steward that when he said "Good Luck Gallery" it meant "Blow yourself on a meal."

It is a great thing when a name stands for all that is good.

It would take a long story to tell of all the goodness of Good Luck Gas Ranges.

But your customers do not have to listen to it, when they want to be shown "The Best Thing in Gas Ranges" and neither do you have to tell them about—

"The Gas Range that is Successful Everywhere."

In response to their inquiry, you say "Good Luck" with the rising inflection, they answer "Good Luck" with a positive inflection, and the deal is made.

You simply "Lead the way" and name the price, there is no argument. The whole story is told in the words—

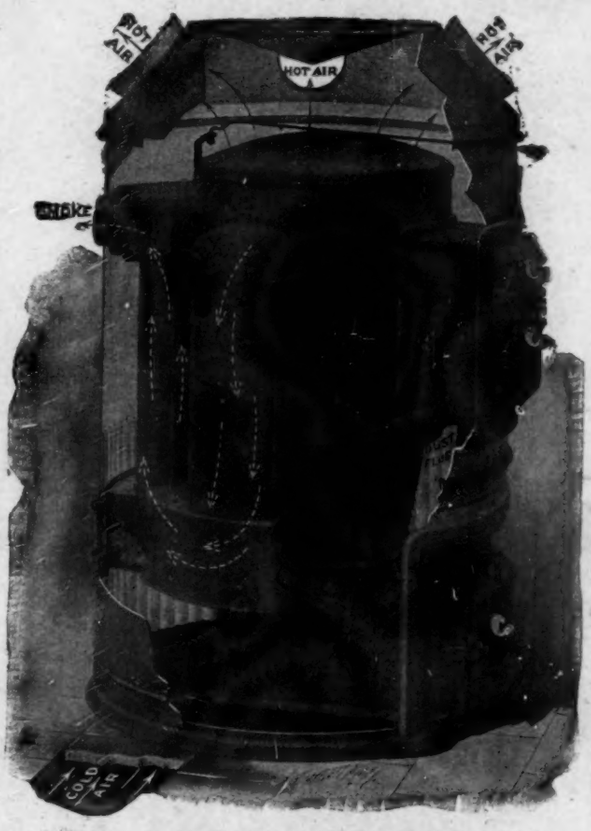
Good Luck Gas Ranges.

We make them.

Stove & Range Company of Pittsburgh

PITTSBURGH, PA.

SEND FOR CATALOGUE



BOYNTON'S STEEL DOME FURNACE

WHY

Are Boynton's Square Pot Furnaces

Taking So Well Among the Trade?

Because they not only have talking and selling points, but because these talking and selling points are **real points of merit** that will stand back of the dealer after he has sold and installed the apparatus.

Write Us for Our Catalogue and Full Description

GET IN LINE

The Boynton Furnace Co.

207-209 Water St., New York
147-149 Lake St., Chicago

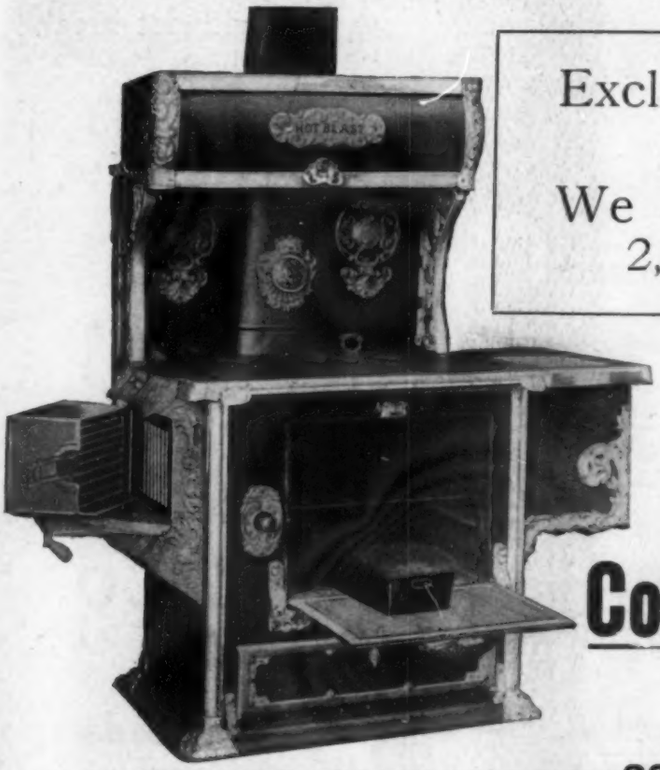
1,000,000 COLE'S HEATING AND COOKING SPECIALTIES IN USE.

The Great Profit Makers and Trade Builders.

COLE'S HOT BLAST
for Soft Coal, Slack, Lignite, Hard Coal, Wood and Cobs. 2 styles and 5 sizes.

COLE'S RADIANT
with Magazine for Hard Coal and and Crushed Coke. 3 sizes.

COLE'S AIR TIGHT
for Wood and Cobs.
7 styles, 5 sizes.



COLE'S HOT BLAST RANGE
The Best High-Grade Cooking Specialty in the World.
15 special selling features.

Exclusive Agency given in each town.

We are now shipping 2,000 stoves daily.

Write us to-day for catalogue.

Cole Manufacturing Company,

3218-38 So. Western Ave., Chica

"The Greatest Light of The Age"

"Conia"

These Conia Burners give a light from **100** to **350** Candle Power, and the flame can be regulated to any desired height. Positively smokeless, and on account of the enormous candle power will not blacken the mantle.

Mantles in ordinary use will last at least a year.

Retail Price, 35 Cts.

Burners, complete to fit

Standard Oil Company's "Rayo"

Central Draught Lamp, **$3.50.**

Retail Price, Table Lamp complete, **$5.50**

Write today. We want agents in open territory.

The New Kerosene Incandescent Central Draught Lamp

Model 1909

The Conia Burners can also be used on the

Standard Oil Company's "Rayo" Lamp.

It is the Greatest Light for private Residences, Halls, Porches, Country Stores, Churches and Public Buildings.

Chimneys are made in Jena, Germany and will not break from heat.

Retail Price, 35 Cts.

G. Cohn & Co.

(Inc.)

337 Broadway

NEW YORK

"Bengalia" Alcohol Incandescent Lamps

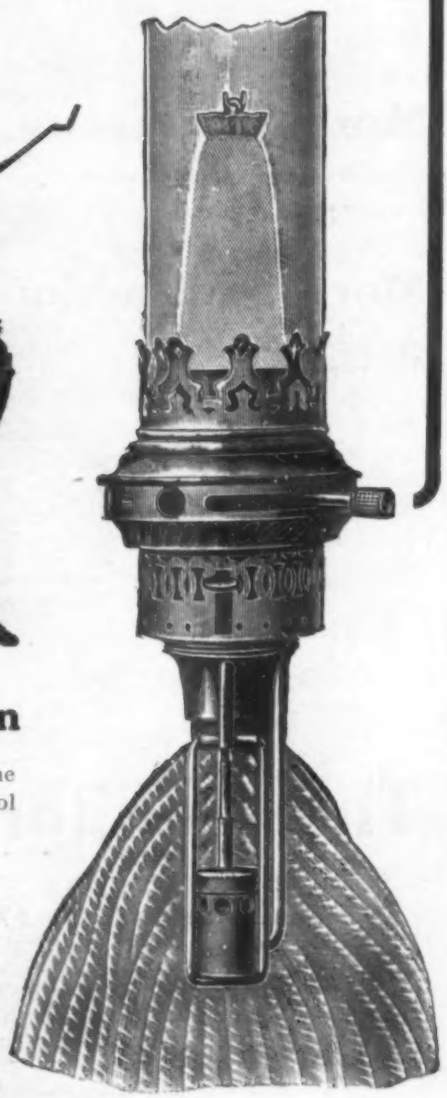
For indoor or outdoor lighting, adaptable to any ordinary D collar lamp.

Superior to any incandescent gas lamp.

No soot — no danger — no smell—no smoke — no wick-burning.

Positively No Blacking of Mantle

A three-year guarantee with each lamp.



Costs 3/4c per Hour

Gives 75 Candle Power.

Consumes one quart of Denatured Alcohol in 16 hours.

We Want One Dealer In Each Town

To handle our specialties. Now is the time to "get in on the ground floor" and establish a good trade in Denatured Alcohol Utilities which are taking the trade by storm.

Write today for Special proposition and discounts

G. COHN & CO., INC.

337 BROADWAY, NEW YORK

THE MONITOR

BASE BURNER WITH FIVE FRONT FLUES

Guarantees

More Heat

for the user with the **1683 square inches** more radiating surface than any other stove has.

More Sales

for the dealer because this stove will sell every day in the week wherever shown.

More Satisfaction

all around. That is why the **MONITOR RADIATOR** is such a complete success.

RADIATOR

Why handle the old out of date style of heater when you can secure the agency for this stove, the construction of which is years ahead of any other base burner on the market?

Write for Full Descriptive Catalog Today

The Monitor Stove and Range Co.

Manufacturers

Cincinnati, Ohio

Distributors

For the State of Michigan, Morley Bros., Saginaw, Mich.
For the State of Minnesota and North West, The Great Western Stove and Repair Co., Minneapolis, Minn.
For the State of Wisconsin, Morley Murphy Hardware Co., Green Bay, Wis.
For the States of Nebraska, Wyoming, Western Iowa and the Black Hills, Paxton & Gallagher Co., Omaha, Nebraska.

ARE YOU SATISFIED

No. 2420
Weight 450 lbs.
Price, Net . . . $22.32

That You Are Handling the BEST RANGE on the Market

for your trade to use? If not how can you expect to convince prospective purchasers that your competitor can not show them something better? Once examine a

LANDAY
Matchless Steel Range

and all doubts of its being THE Range for you to handle will vanish. They can't make them better when it comes to operation, construction, materials and all-around make-up.

The entire range is **just as good as the fire-linings, WHICH WE GUARANTEE FOR THREE YEARS** and that is saying a good deal. When we say that our ranges are built expressly to meet all the requirements of the masses it isn't just talk but really a fact. Better secure the agency at once and set about controlling the range business in your vicinity.

We would like for you to have our Catalog. Write for it and we will send it at once.

CHOICE TERRITORY OPEN FOR HUSTLING SALESMEN

LANDAY STEEL RANGE CO. 2621 North Fifteenth St., **ST. LOUIS, MO.**

Foster's Winner

A Steel Range with all the latest improvements of practical value. This is a range which embodies many distinct and valuable features which mark it at once as the most serviceable as well as the most durable range on the market.

The Body is made of heavy, polished, Wellsville Steel, strongly riveted every two inches, and lined with asbestos throughout. Balanced oven door. Swing ash pit door. Wood extension firepot. Duplex grate. Heavy cast linings. Cast encased reservoir with large enameled tank. Full sized ovens.

Just what the Trade is looking for, a range of superior merit at prices which are right.

Write for Catalog to-day.

The Foster Stove Co.
IRONTON, OHIO

PLACE YOUR ORDERS

With the Old Reliable

OHIO STOVE CO.

STOVES AND RANGES

SATISFACTORY SERVICE
ASSURED
UNDER ENTIRE
NEW MANAGEMENT

PORTSMOUTH, O.

MR. DEALER!

Are You the Man

looking for a specialty that will attract trade, yielding a good profit?

It Will Pay You

to get acquainted with the quality features of
THE IMPROVED PATENTED

PRINCESS STEEL RANGE

Where it is known it commands the bulk of the trade.
Ask for Special Agency Proposition.

ALLEN MFG. CO.. NASHVILLE, TENN.

STEEL CASING RINGS

Are Made to Conform to Individual Requirements in Every Respect

NEVER BREAK **CIRCLES PERFECT**

With Lugs—For Double Casings
Without Lugs—For Single Casings
Full Circles—For Ordinary Use
Partial Circles—For Full Cast Fronts

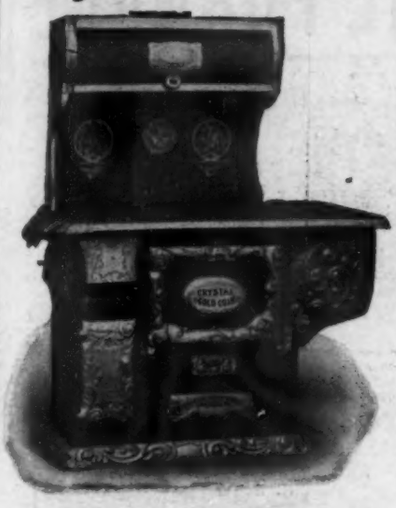
Always to Exact Circumference From Your Own Dimensions.
Write Now.

READY TO USE **INCREASE PROFITS**

The Walworth Run Foundry Co., 27th St., S. W., Cleveland, O.

We also manufacture **Fine Grey Iron Castings** and **Semi-Steel Registers**

Crystal Gold Coin Range



For Coal or Wood or Wood only
Duplex Grate

This is a range built especially to meet the demand for a range to sell at a moderate price. But it is not put together cheaply. It is honestly made and will give satisfactory, durable service.

Handsomely ornamented with nickel and a good range for you to handle.

Our line of stoves and ranges is composed of sellers, every one of them and that's why YOU should write for our catalog.

CHICAGO STOVE WORKS
Blue Island Ave. and 22nd Street, CHICAGO, ILLINOIS

HEAT LIGHT
FOR THE
HOME
STORE
HOTEL
SCHOOL
CHURCH
OFFICE
COLLEGE
THEATRE
FACTORY
VILLAGE
INFORMATION FREE
SEND FOR IT.
DETROIT HEATING AND LIGHTING CO.
DETROIT MICH.

The MONITOR RADIATOR

BASE BURNER WITH FIVE FRONT FLUES

has *1683 Square Inches* more Radiating surface than any other Base Burner made.

THE BIGGEST SELLER ON THE MARKET

You should secure the Agency at once. *Write today to*

PAXTON & GALLAGHER CO., Omaha, Neb.
Exclusive Distributors for the West

You
Tell the Tale.
THE AMERICAN ARTISAN
Will Spread It.

We Make It!

The BEST Air Drying Iron Enamel Made.

Try a 1-Dozen Case From Your Jobber

Nickel Plate Stove Polish Co.
CHICAGO.

Large 10 oz. Can.

Readily Mixed

Black
Brilliant
Durable
Water Proof
Rust Proof

Dry Powdered and Oil Paste
STOVE POLISH
KEEPS IN ANY CLIMATE—FOR DEALERS' USE.

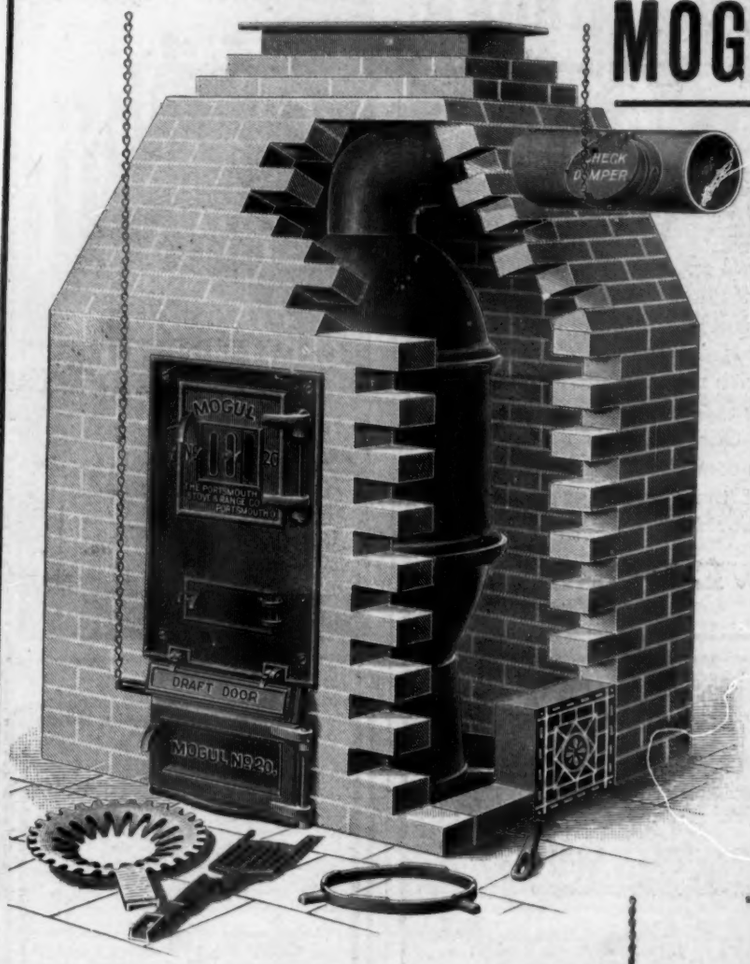
A-B

METAL POLISH
IRON ENAMEL

BRILLIANT and LASTING

A-B POLISH CO., 8-14 Haddon Ave., CHICAGO, ILL.

MOGUL FURNACE



(BRICK SET)

"THE FURNACE WITH A RECORD"

"Ask the Man" who has one how it moves **"Hot Air"** in the right direction and **lots of it, too;** with very little fuel or attention. It is as simple to manage as an Oak Stove.

You can burn

HARD COAL
SOFT COAL
OR COKE

and **no clogging up of flues.**

You can sell and set up this furnace for $75.00 and have more than three times the profit you can get on a hard coal base burner. Don't this look good to you?

MOGUL FURNACE

With Galvanized Iron Casing

Water Coil may be used for heating radiators, or water for bath tub and sink, at very small cost for installation, and NO EXTRA COST FOR FUEL to operate furnace.

This is the furnace that has "earned a reputation" that sells it. Don't be misled and buy imitations brought out by the MOGUL'S wonderful popularity. **Get the Real Thing.**

Don't Experiment with an imitation. Remember the name "MOGUL."

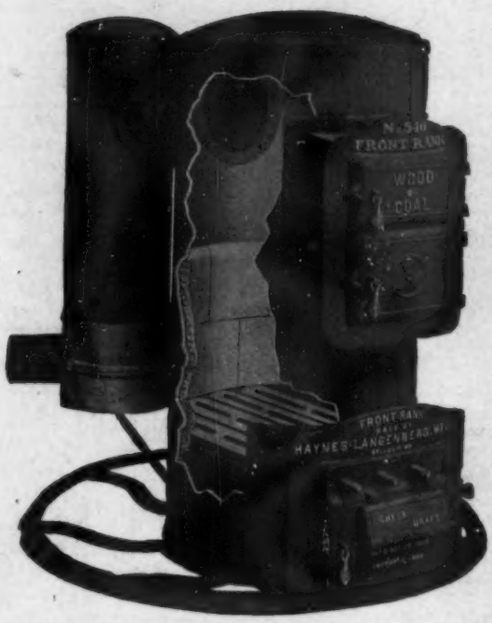
Costs you nothing to learn all about it.

The Portsmouth Stove & Range Co.

Portsmouth, Ohio

OTTO HARNISCH
1111 Sheridan Avenue, Saginaw
Michigan Representative

For Economy
For Durability
For Lasting Results



INSTALL THE

FRONT RANK STEEL FURNACE

Built Like A Boiler.
Absolutely Gas and Smoke Proof.
Over 10,000 in Use in Our Home City
ST. LOUIS
Thousands Elsewhere.

We want agents everywhere. Write for our attractive Proposition, Catalog and Terms. Write us today.

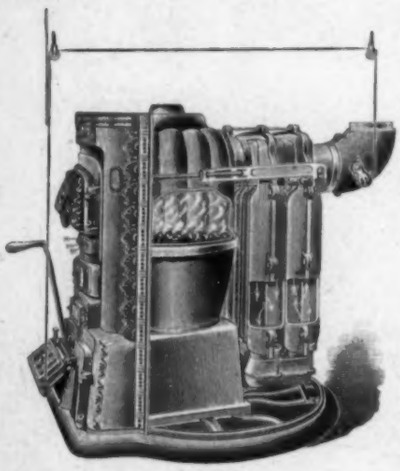
Sales Agents for Wisconsin and Northern Peninsula of Michigan
CORDES HEATING & SUPPLY COMPANY, MILWAUKEE, WIS.

HAYNES-LANGENBERG MFG. CO.

4045-4047 Forest Park Boul., ST. LOUIS, MO.

BENGAL

ALL CAST IRON FURNACE



Most Powerful and Compact Furnace Ever Produced

Burns perfectly Anthracite or Bituminous Coal or Coke. Has solid cast front and deep ash-pit.

EITHER DRAW-CENTRE, ANTI-CLINKER GRATE OR TRIPLEX GRATE which can be drawn out through ash-pit.

Adapted to all kinds of cellars as **they stand but 42 to 50½ inches high** from the floor to top of upper casing ring, allowing plenty of elevation for hot air pipes.

HAS MORE RADIATING SURFACE THAN ANY OTHER FURNACE OF THE SAME SIZE.

WRITE TODAY FOR COMPLETE DESCRIPTIVE MATTER.

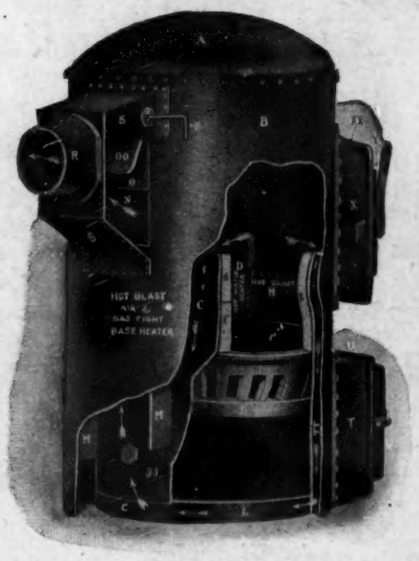
THE FLOYD-WELLS CO.

ROYERSFORD, PA.
83 Kinzie St., CHICAGO, ILL.

Are You Making Enough Money

OUT OF YOUR FURNACE BUSINESS?

If not handle the



Quaker Steel Furnace

(The acme of modern scientific furnace construction.)

HEAVY STEEL. ABSOLUTELY GAS TIGHT. BASE HEATER.

Burns any kind of fuel. Every **Quaker Furnace** installed is a permanent advertisement for more business.

Quaker Steel Furnaces command a better price from your customers. There is always a nice profit in handling **Quaker Furnaces.**

Let us send you the names of some of our money making dealers who put in **Quakers** exclusively, and who have captured the business of their town. Write them yourself. If they can make money you can. Write for our catalogue. We will help you sell **Quaker Furnaces.** Ask us about it.

Quaker Manufacturing Co.

Dept. A, 40 DEARBORN STREET, CHICAGO, ILL.

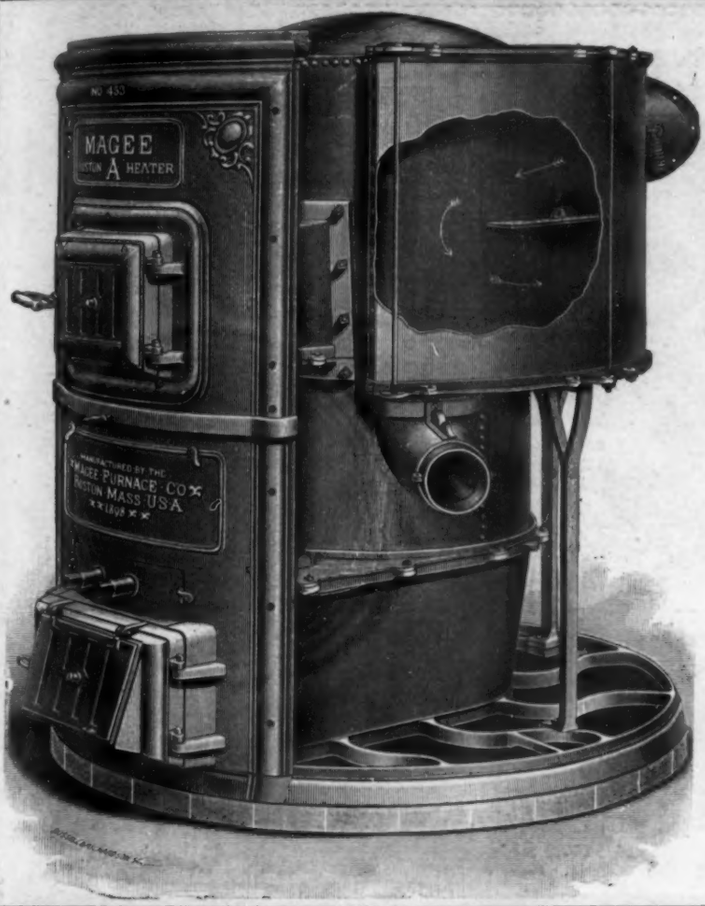
Monarch Air Blast

All the advantages of our famous MONARCH plus the air blast. This is a sectional upper fire pot constructed so that oxygen is fed into and above the fuel burning the gases, assuring economy, cleanliness. It is the most practical soft coal furnace offered the trade.

Forest City Foundry & Mfg. Co.

CLEVELAND, OHIO

Mfrs. The Imperial, Niagara and Combination Furnaces, Registers, Mail Boxes, Hitching and Sash Weights, Etc. Write for our new Catalog.



MAGEE ILLUSTRATION NO. 1

FIRST AND FOREMOST

MAGEE

BOSTON HEATER

A series made in six sizes.

BUILT TO WEAR.

Wrought Iron Radiator; Gas Tight Cup Joints; Brick-Lined Fire-Pot, Linings That Last for Years; "Dock-Ash" Revolving Grate, No bolts Used in This Grate.

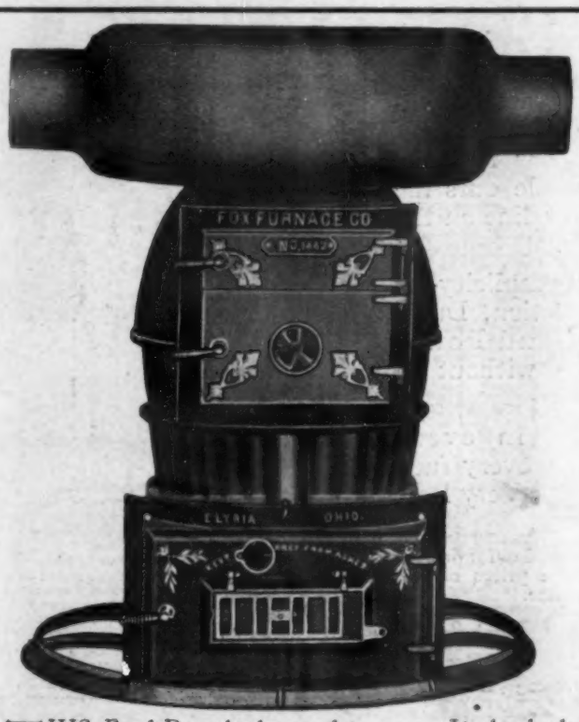
Furnace is easy to take care of and heats greatest amount of space with given amount of fuel.

We Cannot Make a Better Furnace

If not handled in your territory, don't waste any time. Write immediately to

MAGEE FURNACE CO.

86 East Lake Street, CHICAGO, ILL.

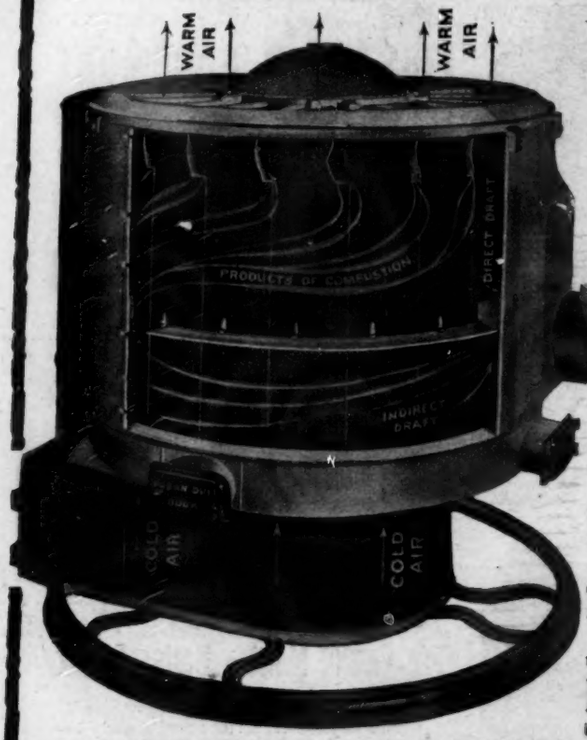


THIS Feed Door looks good to you. It also looks good to a man who buys a furnace. It helps the dealer to make sales and it is a furnace that my neighbor has and I want one. See the many advantageous points:—Large ash pit; straight fire pot; large grate surface; large combustion chamber; large radiator; smoke collars all come through casing. Well fitted; easy to set up. With our enormous plant in the center of the iron district we can give you a better furnace than you can get elsewhere and make you dollars. Our aim is Quality. Fox Furnaces do not wear out.

SEND FOR CATALOGUE AND PRICES.

THE FOX FURNACE CO., Elyria, Ohio

The Third in a Series of Reasons Why The KELSEY is the BEST Warm Air System.



The KELSEY Immense Fire Travel

In most furnaces the smoke and gases pass once around a "radiator" and then direct into the smoke outlet.

In some furnaces the smoke and gases pass from the combustion chamber direct to the smoke outlet.

But in the KELSEY it's different—because the KELSEY is not a furnace.

In the KELSEY, the products of combustion emerge from the combustion chamber into the upper Flue or Draft Chamber, and then pass way to the front of the Generator—then down and way to the back, into the smoke outlet. On the inner side the Draft Chamber is formed by the circular wall of KELSEY ZIG-ZAG Heat Tubes. The outer wall is formed by a *cast iron* sectional casing that will not crack or warp or leak gas—even in very damp climates.

Both inner and outer walls of the Draft Chamber are prime heating surface—fresh air flowing up thru the ZIG ZAG flues that form the inner wall —fresh air flowing up thru the space between the outer cast casing and the galvanized casing that encloses the generator.

In no other warm air system are the heat units used to such good advantage as in the

KELSEY Warm Air GENERATOR

(Trade Mark Registered in the U. S. Patent Office)

KELSEY HEATING CO., Syracuse, N. Y.

NEW YORK: 156 Fifth Ave. PHILADELPHIA: 24 So. 7th Street. James Smart Mfg. Co., Brockville, Ont.
CHICAGO: Van Evera & Lewis Mfg. Co., 104-106 W. Lake St. Sole Makers for Canada.

One Quality—THE BEST

The practical improvements embodied in our furnaces have made ours the foremost line on the market.

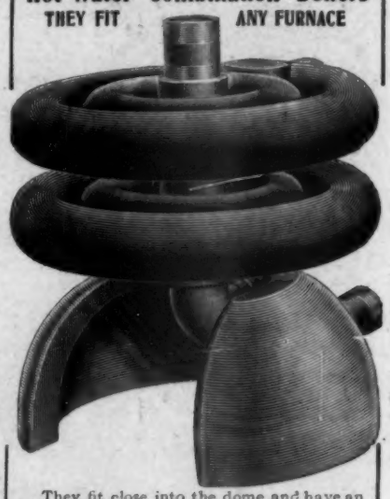
For simplicity of Construction, Durability and Power they are without an equal.

Made in every style, for every fuel, and of the Very Best materials.

Write to-day for printed matter and prices of our complete line.

Walter S. Rait & Co.
211-213 Lake Street
Chicago, Ill.

THE CHAMPION
Hot Water Combination Boilers
THEY FIT ANY FURNACE



They fit close into the dome and have an open front at fire door. In small heaters base section can be used alone. One or more rings may be added for additional capacity to be determined by the amount of hot water radiation to be used. All joints absolutely tight.

WRITE FOR CATALOGUE.

FRANK D. STOLZ, Manufacturer
156 Webster Ave., CHICAGO, ILL.

Jesse J. Hensel, Milan, Wis., writes: "I find your publication of such inestimable value in my previous capacity as hardware manager for a large firm located in the western part of this state, that I feel as if I could ill afford to be without it now."

FURNACE WITH CAST FIRE POT.

800 MARVEL HEAT PRODUCERS Series

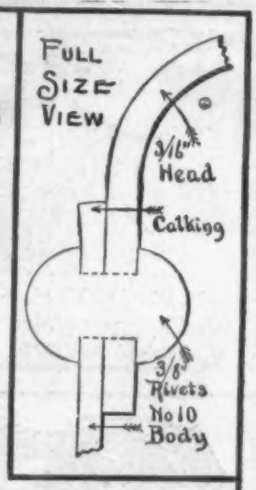
BETTER FURNACES

Large Powerful Heating Surfaces.

Two-Piece Cast Iron Pot.

Flat Dumping and Shaking Grate, or Marvel Triangular Bar Grate.

Large Feed Door. Well Made.



WRITE FOR CIRCULAR.

INTERSTATE MANUFACTURING COMPANY

OSKALOOSA, IOWA

A New Low-Down Crown Cast Iron Warm Air Furnace

Less the all cast front. For hard or soft coal. Very powerful. All parts extra heavy, and adapted to severe usage. Price such that it CAN BE SOLD AT A PROFIT in any territory.

MADE IN THE FOLLOWING SIZES:

Sizes.	Diameter of Casings.	Diameter of Firepot.	Height of Castings—less feet.	Diameter of Smoke Pipe.
No. 132	32 inch	18 inch	43 inch	7 or 8 inch
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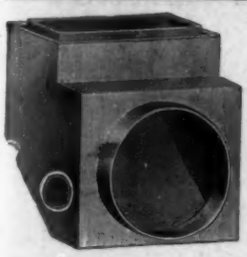

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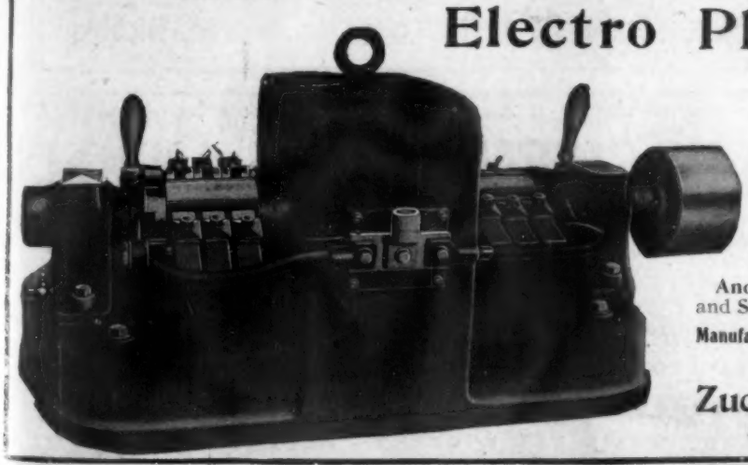

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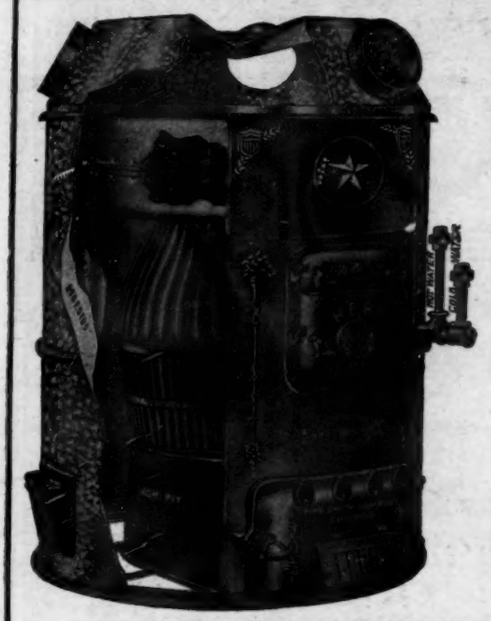

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The Dome is high enough to give an extra large combustion chamber but the furnace is low enough to fit in shallow basements.

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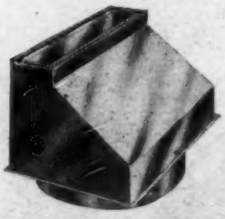

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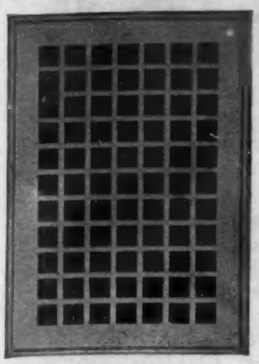

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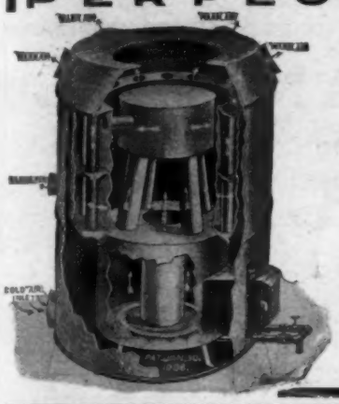

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All of which are essentials of the Really Good Furnace are featured in the

MONCRIEF

TOP RETURN FLUE WARM AIR **FURNACE**

In the MONCRIEF Furnace special attention has been paid to the little details, and efforts in that direction have not been wasted as they have assisted materially in making this a furnace which is unsurpassed for operation and durability.

FEATURES: Burns all grades of hard and soft coal; all cast iron; Moncrief Duplex Grate; large radiating surface; double fire-pot; large grate surface and cleanliness in use.

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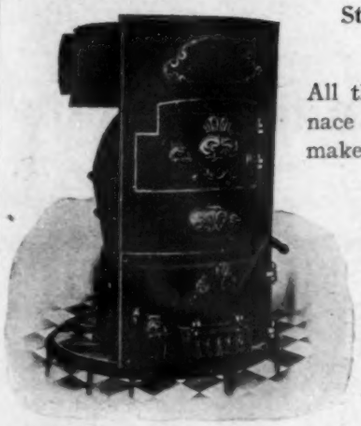

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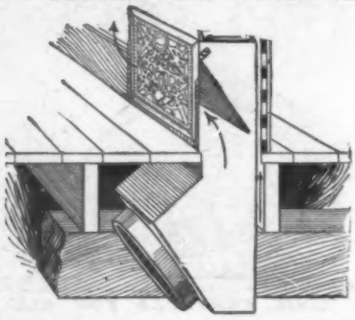

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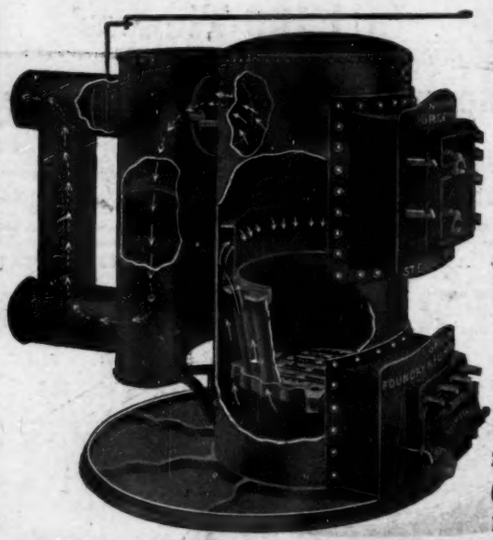

in 1908 will be much larger than it was in 1907, if you can show your prospective customers something better than your competitor is showing. Why not sell a furnace combining all of the desirable features of furnace heating?

GREEN'S BASE HEATER

is built with a **slotted fire pot,** thoroughly consuming the smoke and gases, and **reducing the cost of fuel.** The fire pot is the most durable of any used in Steel Furnaces as the **ashes cannot accumulate behind it.** The heat penetrating through the pot and steel surrounding it, makes **every inch of this furnace heating surface from the bottom plate to the top.** A powerful heater, something good which your customer will appreciate, something better than your competitor can show. Large radiator with **long smoke travel; double feed doors;** grate bars which operate **independently of one another,** with hollow centers; deep ash pit. A furnace which **costs no more than any good furnace,** but heavy, durable, combining all of the **advantageous features of furnace heating.** **Write for our Catalogue.**

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The experience of forty-five years of progressive manufacture makes Juniata horse and mule shoes perfect in shape, finish and quality of metal.

The true worth of the Juniata shoe begins at our mines and continues through our blast furnaces where the different ores are amalgamated. In our own melting processes the character of the metal is established, and from thence through our rolling mills is given the final and unchangeable quality.

Then comes the cutting, shaping, creasing and punching, to do which our old Shoenberger mill in Pittsburg is equipped with every known modern appliance and facility, superintended and manned by men who have spent their lives in becoming masters, each in his particular line.

We offer the Juniata shoe as the product of the greatest mines, steel producing plants and fabricating mills in the world; and with these good facilities and the old and skilled employes back of them, is maintained the highest standard of excellence possible for human ingenuity to produce.

Quick Comfort Gas Heating Stoves

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Constructed Especially for the Economical Use of

NATURAL GAS

PERFECT in Operation Built so as to Secure the Proper Combustion of the Fuel and Produce the Required Amount of Heat

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Entered as Second-Class Matter June 25, 1885, at the Post Office at Chicago, Illinois, under Act of March 3rd, 1879.

THIS PAPER IS A MEMBER OF THE CHICAGO TRADE PRESS ASSOCIATION

CHICAGO, SEPTEMBER 5, 1908.

THE Geological Survey announces that the world's production of zinc spelter in 1907 was 813,842 short tons, against 775,871 tons in 1906. The United States was the only country with a large increase, having advanced from 224,770 tons to 249,842 tons. Belgium produced in 1907, 170,307 tons, and Silesia, 152,611 tons, both slight increases.

THE jewelry trade, which is first to feel depression and about the last to get the benefit of returning prosperity, has begun to revive. The chairman of the customs committee of the Diamond Manufacturers' Association said a few days ago that for eight months wholesale dealers practically sold nothing, but within a short time the retail jewelers had started to make purchases, replenishing the stock that in many cases had been reduced to a minimum because of the caution and timidity that prevailed. There is no surer sign of prosperity than the revival of the jewelry trade. People are not in the habit of buying jewelry during dull times, for they need their money for such necessities as stoves and hardware.

THE production of denatured alcohol in the United States for the fiscal year ended June 30 amounted to 7,000,000 gallons, the largest producer of denatured alcohol in the country being the United States Industrial Alcohol Co., owned by the Distilling Company of America interests. In Germany the output of denatured alcohol for twelve months was something like 120,000,000 gallons. There the use of the article has been extended, and it is proposed in this country to increase the consumption by advertising the qualities of this character of alcohol. So far as cheapness is concerned, the cost in the United States has been reduced to a point where it has been made available in certain manufactures with a large saving in the cost of manufacture. According to Washington advices, inquiries from the country regarding denatured alcohol have not been as numerous this year as was expected. It is realized, however, that there is a great deal to be learned concerning the product.

THE smelter production of copper in the United States in 1907 was 868,996,491 pounds, according to figures furnished by the United States Geological Survey. As compared with the production of the preceding year, that in 1907 shows a decrease of 48,809,191 pounds, or 5.6 per cent, the largest actual decrease ever reported. The principal decrease was in the three states of highest rank as producers of the metal. Montana's production dropped from 294,701,252 pounds in 1906 to 224,263,789 pounds in 1907. Arizona produced 256,778,437 pounds in 1907, a decrease of about 6,000,000 pounds, but still sufficient to place the state ahead of Montana and in the lead. Michigan, in third place as a copper producer, turned out 219,131,503 pounds during the last year, a decrease of about 10,000,000 pounds.

The Warm Air Furnace.

THE ADDRESS of Mr. Charles S. Prizer of the Abram Cox Stove Company of Philadelphia, president of the Federal Furnace League, at the fourth annual convention in Chicago of the National Association of Master Sheet Metal Workers, was one of the ablest discourses on the subject of warm air furnace heating ever delivered before any trade association. There are few men who are as well qualified to speak upon this important subject as Mr. Prizer, and certainly none who possess higher ideals relative to the conducting of the warm air furnace business on honest principles than he. For years past Mr. Prizer has on numerous occasions dealt death-dealing blows to the malpractice that has characterized this branch of the trade and which has incontrovertibly been the means of placing the warm air furnace as a heating agent in an unfavorable light, for it is true that owing to the debasing of furnace heating by inferior products and improper installation, the public has been led to believe that this method of heating is inherently an unsatisfactory and inferior one. In many instances it has been the altogether inadequate price of furnace heating with the attendant insufficient capacity and incorrect installation that has worked so effectively in bringing the warm air furnace into disrepute. Nor has the warm air furnace alone suffered from this baneful policy. Other systems notably steam and hot water have suffered and are still suffering from the same cause.

It is high time that this condition of affairs should end, for there never was a greater opportunity than the present one to place the warm air furnace in the desirable position to which its superior merits entitle it. It cannot be disputed that it possesses a number of advantages which other systems of heating lack. Heating by direct radiation is condemned by every hygienic and sanitary test, and the most eminent authorities are unanimous in their opinion that there is but one correct and sanitary method of heating and ventilating a house, and that is by pouring pure warm air into it in sufficient volume, and to remove the colder and impurer air from the rooms.

That the interests of master sheet metal workers in

this heating situation are identical with the interests of those who own and occupy houses, was pointed out by Mr. Prizer in the course of his address. The sheet metal worker has practically no part in a direct steam or water job, while on the other hand the installation of a warm air furnace plant is a sheet metal work proposition. The sheet metal worker is continually surrounded by opportunities whereby he can raise the standard of warm air heating. He can take a hand in improving the sanitary conditions of the homes of the people, and at the same time advance his own interest by installing heating and ventilating plants which will fulfill the hygienic and practical requirements of approved methods and of modern civilization. Such men as Charles S. Prizer are doing a world of good by incessantly urging sound principles in the warm air furnace business and with the co-operation of the master sheet metal workers throughout the country the warm air furnace will be given an opportunity to regain its lost prestige.

Railroad Business Improving.

It is shown by the latest fortnightly bulletin of the car efficiency committee of the American Railway Association that the total number of idle cars in this country and Canada on August 19 was 253,003, a decrease of 28,618 as compared with the number on August 5. This is a more pronounced improvement than took place in the preceding two weeks, and is the greatest reduction in the number of idle cars since the period ended on June 24. As a matter of fact, however, the improvement is considerably greater than appears from these figures, because of a decrease of 5,200 in the number of bad-order cars, which are not included in the total of surplus cars. The actual gain made during the two weeks ended August 19 is therefore 33,818 cars, a figure which is close to the best fortnightly showing made since the panic of last fall.

The previous bulletin reported a decrease of 27,059 in the surplus cars, but also indicated that about 5,000 cars had been added to the repair shop lists, leaving a net improvement of only 22,000 cars. That result was attributed by railroad men to the sending of cars to the repair shops on account of minor defects discovered on overhauling stored cars for restoration to service. In the following fortnight, the records of which are given in the latest bulletin, the influence of car repairing worked just the other way; that is, the number of the cars turned out from the repair shops exceeded by 5,200 the number sent in for repairs, and, therefore, increased by that many the number fit for service. Notwithstanding this wholesale return of cars from the shops there was, as stated, a net decrease of 28,618 cars in the number standing idle. Hence the number in use must have increased by a total of 33,000.

At 253,000, the stock of idle cars represented on August 19 a decrease of 160,000 cars from the maximum reported as of April 29, which was 413,000. The improvement in the railroad business of the country since the time of extreme depression four months ago has drawn back into the handling of traffic nearly 40 per cent of the cars then idle. The decrease reported in the latest bulletin was distributed generally over the country, only one district, that embracing Montana, Wyoming and Nebraska, showing an increase in idle cars. In this district, however, the number is so small that the increase may easily have been effected by extra heavy return of cars from the shops. In New York and the middle Atlantic states the reduction was approximately 15 per cent. In Ohio, western Pennsylvania, and the surrounding territory, it was close to 10 per cent. In the Virginias and Carolinas the number of idle cars was reduced upward of 20 per cent. There was an equally pronounced improvement west of the Missouri river and south of Nebraska.

While the railroads as yet have not felt the return of prosperity to as great an extent as other lines of industry, there is every indication that as this year's crops will be enormous and diversified, the fall will see a reduction of tens of thousands of idle cars from the 250,000 reported in the last railway bulletin. Unprecedented prosperity will be the portion of the farmers everywhere throughout the country this year, and it follows that the railroads will share in the general prosperity in the course of a few weeks.

Industrial Education Convention.

The National Society for the Promotion of Industrial Education announces that its next annual meeting will be held at Atlanta, Ga., on November 19, 20 and 21. The first day will be devoted to the meetings of state branches and state committees and to the annual meeting of the Georgia branch. A banquet will take place on the evening of November 19, at which the president of the Georgia state branch, Mr. Asa G. Candler, who is president of the Atlanta Chamber of Commerce, will preside. Industrial education as it relates to the prosperity of the country will be discussed at the banquet by eminent men representing the educational and industrial interests of the people of the United States. Governor Smith of Georgia has accepted an invitation to extend the welcome of the state and to point out how an effective system of industrial education will result in lasting prosperity to the country and, therefore, in benefit to the industrial workers. The other banquet speakers are to be Dr. Elmer E. Brown, United States Commissioner of Education; Hon. James Wilson, Secretary of the Department of Agriculture; Andrew Carnegie; and the president of the National Society for the Promotion of Industrial Education, Dr. Carroll D. Wright, former United States Commissioner of Labor and now president of Clark College. An exhibition of trade school work from all over the United States will be one of the features of the convention. This exhibition is being prepared under the direction of Professor K. G. Mathewson, president of the Georgia School of Technology, Atlanta.

RANDOM NOTES AND SKETCHES.

BY SIDNEY ARNOLD.

A new prosperity association known as "The Optimistic League" has, I am informed, been organized in the east by John D. Green, secretary of the New York State Association of Stove Manufacturers and others. It is said that all enthusiastic citizens are eligible to membership in the league who will agree to smile at

least once a day and do everything in their power to spread and "get the habit" of smiling, and who will refuse to talk or listen to the talk of hard times and will endeavor to think, talk and act prosperity. John D. and his friends are evidently believers in the saying, "You've got to be an optimist to win." And you have. The Bible does not teach anything that is truer than this in my opinion. No matter how much you may think you have won, you don't know beans about winning until you're an optimist. No person ever mastered self, as Leigh Mitchell Hodges says, by bemoaning the flaws that lurk within. Tears never wash away anything except self-reliance and self-respect, and heaven knows, we need all we have of these great treasures, without risking their loss in such a foolish pastime as the weeps. This business of being an optimist is not in the least degree injurious to the facial muscles or the mouth. Cheerfulness is a state of mind, not of the mouth. Some persons have an idea that the optimist is one who smiles at everything and always says "O well!" most carelessly whenever anything goes wrong. I have known optimists who seldom smiled, yet they were mighty good "ops" at that. The fact that one believes in the everlasting possibility of better things is no excuse for being a grinning gringo. Most humorists look like conscientious undertakers, so why shouldn't a few optimists tread softly on the smile. The true optimist is the person who has a thought-umbrella for every misfortune-rain that comes along; who isn't blind to what is wrong and out of joint, but simply prefers to let the eyes rest longest on what is right and in place; who lets the thorns in the flesh stay thorns in the flesh, not allowing them to become thorns in the mind, and above all, who knows that none of the possibilities for better things is worth thinking of unless he himself goes to work to pave the way for those better things. A smile, however, often tends to brighten the optimistic feeling. Johnnie Green and his friends of "The Optimistic League" evidently realized the truth of this statement when they decided to make it obligatory on every member of the league to smile at least once a day.

* * *

Loss of a valuable diamond ring by Mrs. Walter Vernon, Jr., of New York, in the waters of Great South Bay and the subsequent discovery of the ring in the body of a soft-shell crab which was caught in the bay and was served to Mrs. Vernon at dinner on the following day, is the experience which is credited to that lady. The ring, which bore a two-karat diamond, slipped, it is said, from Mrs. V.'s finger while she was in a motor boat enjoying a fast ride on the briny deep. The spot where the ring was lost was marked with a buoy, though the chance of recovering the ring was, of course, considered slight. In view of the fact that the chef and his assistants at the hotel where the dinner was served, deny all knowledge of where the crab got the ring, we must therefore place the full responsibility for the "crime" on the crustacean, despite the apparent injustice of the act. Had the crab been allowed to have its freedom for at least two or three days I would be less inclined to exonerate it from the charge of larceny. This sounds about as good as any Arabian Night's story that I have ever read, but it isn't one, two, three with some of the fish-stories that have recently been thrust upon me.

* * *

My old friend "Doc." Fribley of Chicago and his chum Jack Gludt of the same city, report that they have discovered a new way of catching fish. Not long ago they were up in Minnesota not far from Lake City when one afternoon while sailing over the waters of a lake at about a ten-knot clip in their little craft, the Pearl, the boat struck a submerged rock which punched a hole in the boat's bottom. With visions of shipwreck, desert islands, and cannibals, Gludt valiantly stuck his finger into the aperture, through which the water was gushing, and thereby stopped the flow. Steering the boat for the shore, about half a mile distant, his spirits returned when without warning a large fish attracted by a heavy gold ring on the finger that protruded from the bottom of the boat, struck at it and grabbed finger and all. Quick to perceive an opportunity to distinguish himself Gludt just crooked his finger, fishhook shape, and held on with Spartan courage until shore was reached. Then "Doc." Fribley got out and, reaching under the boat, grasped the fish and threw it on land. It proved to be a black bass weighing five and three-quarter pounds, according to the story. If "Doc." had not always impressed me as a man who told the truth on all occasions, I would have been inclined to think that he was trying hard to go Mrs. Vernon of New York one better.

* * *

"Doc." Recher and Herman Rogers of Morocco, Ind., who a few days ago were camping on the Kankakee river, are mourning the loss of what they say was the largest pickerel ever caught in the river. The fish was hooked by Rogers, who, finding himself unable to manage his catch, called on the physician for assistance. After a long struggle the pickerel was landed, but it showed no signs of capitulation. With its mouth open till it looked like the entrance to a subtreasury vault the pickerel gave a mighty bound for the water, striking Rogers in the stomach with its long, pointed nose and knocking him down. At this juncture "Doc." Recher got busy and threw himself into the breach, and grappled with the fish, the man and the "monster" rolling down the bank to the very edge of the water, where the pickerel administered a stunning blow on the side of Recher's face with its tail and then escaped into the river. The men estimated its weight at twenty-eight pounds. I had hoped that with the cool weather that has been prevailing in the central states for the past week or two there would be less evidence of mental instability among people in the section of the country referred to, but as yet there is little indication that the situation has improved over that of a few weeks ago. There seem to be just as many fish-stories in circulation as ever, unfortunately for those who are endeavoring to preach the gospel of truth.

* * *

EASY TO FORGIVE.

When Pat Devine kissed pretty Kate McGee
She was not mad—the reason's plain you see—
For with his kiss, she cried, "Oh, Pat, be mine!"
To 'er 'twas human to forgive Devine.

News Siftings

It is probable that a plant for the manufacture of stoves will shortly be erected at Macon, Ga.

The Mattoon Stove and Range Works, of Mattoon, Ill., have resumed operations after a shut-down of several weeks.

The Mount Penn Stove Works of Reading, Pa., has resumed operations, after a period of idleness, with all departments running on full time.

The Quakertown Stove Works of Philadelphia, Pa., has resumed operations after an idleness of two months, giving employment to about 100 men.

Delahaye Bros. of Pembroke, Ont., have purchased the plant and stock of the Canadian Stove Co., of Ottawa, Ont., for $50,000. The business was started two years ago.

Fire on August 26 partially destroyed the plant of the A. J. Lindemann & Hoverson Co., manufacturers of stoves, Milwaukee, Wis. The shipping department was completely destroyed and the loss is estimated at $75,000.

The Central Stove & Foundry Co. is the name by which the Central City Stove Works of Newark, O., will be known in the future. The plant will be moved to Anderson, Ind., where two acres of ground have been purchased.

The Eriez Stove Co. of Erie, Pa., is erecting an addition to its plant which, when completed, will cost in the neighborhood of $9,000. The company reports a large volume of business with orders coming in with encouraging rapidity. They are operating their plant on full time, and have been for some time past.

The Hammack Steel Range Co., of Knoxville, Tenn., will start up its plant in South Knoxville, about the middle of September. At the first annual meeting of the company held recently, the following officers were elected: President, E. J. Wooten; vice-president, T. J. Hinken; secretary-treasurer, Frank J. Jones.

The Odin Stove Mfg. Co., Erie, Pa., makers of Odin gas heaters, ranges and appliances, have just issued their catalogue No. 20, which they are sending to the trade. With their original tri-process pure-air gas heater, The Odin Stove Mfg. Co. says that none of the waste products from the fire-box have any chance of entering the room, one individual set of flues carrying the poisonous gases from the fire-box away and up the chimney. This heater is made of cast iron with the exception of the upright tubes, which are of polished steel.

The Bengalia inverted alcohol light handled by G. Cohn & Co., 337 Broadway, New York City, is claimed by them to be the cheapest lamp for lighting stores, cheaper than electricity, and giving a beautiful white and steady light. It consumes one quart of denatured alcohol in 14 hours, the fount holding about 1½ quarts. This light, which has a candlepower of 220, is suitable for lighting halls, parlors, stores, gardens, streets, store windows, etc., and is not affected, it is said, by rain or storm. G. Cohn & Co. state that the Bengalia inverted alcohol light is becoming more and more popular, and that it is meeting with as much success as their celebrated "Conia" light, the new kerosene incandescent central draft lamp. When writing G. Cohn & Co. kindly mention THE AMERICAN ARTISAN.

The Obermayer Bulletin for August, issued by the S. Obermayer Co., Cincinnati, Chicago and Pittsburg, contains a number of interesting articles among which may be mentioned: "The Use of Plumbago," by Paul R. Ramp; "Aluminum in the Foundry"; "The Use of Sea Coal in the Foundry"; "A Jobbing Shop Way Out West," by David Baxter; "A Few Things About Loam Molding"; "Things That are Usually Wrong Around and Away From the Foundry," by C. R. McGahey. The usual number of breezy paragraphs appear in the bulletin.

Foster's Superb Oak stove, manufactured by The Foster Stove Co., Ironton, O., is a handsome stove and said to be superior in both appearance and utility to the ordinary oak stove. It is mounted with heavy polished steel body, and is fully nickeled and complete in every detail, the makers say. The Foster Stove Co. states that they are having an unusually successful season with this stove, and that it is gaining in popularity all the time. Good descriptive literature on application. When writing for it kindly mention THE AMERICAN ARTISAN.

Eugene Munsell & Co., 68 Church street, New York, and 358 Dearborn street, Chicago, say that the demand for Munsell's mica is increasing every month. This mica, they say, is the standard for high-grade base-burners and other stoves, many of the leading stove manufacturers and hardware jobbing houses using it exclusively. Munsell's mica is put up in assorted packages expressly for the retail trade, delivered to any part of the United States free of transportation charges. When writing Eugene Munsell & Co. kindly mention THE AMERICAN ARTISAN.

The Fox Furnace Co., Elyria, O., manufacturers of the celebrated Fox Tubular and other furnaces, have put on the market a line of stoves than which, they say, there are no better sold. The "Princess Czarina" and the "Radiant Czarina" are well known to the trade as base-burners of superior quality. Both these stoves are handsome in design and substantial in construction. The Fox Furnace Co.'s "Twentieth Century" and "Forest City Gem" hot blast stoves are constructed on scientific principles and are acknowledged to be very efficient heaters. The "Junior Oak," the "Hot Blast Oak," and the company's two and four-hole laundry stoves have also acquired a reputation for reliability. The Fox Furnace Co. will be pleased to forward their catalogue upon request. When writing for it kindly mention THE AMERICAN ARTISAN.

A stove plant and general job foundry will be established in the near future at Houston, Tex., E. H. Holliday of Knoxville, Tenn., being at the head of the enterprise. The foundry will have a capacity of 30 stoves and ranges a day, of various sizes and patterns, besides casting up two tons of iron on miscellaneous work. Plans are being drawn for the buildings which will be constructed of cement and iron and which will cover three-fourths of an acre. Mr. Holliday is an experienced foundryman and up to two years ago operated the stove works at Maryville, Tenn. It is his in-

tention to put up a plant that will represent at first an investment of $25,000. The machinery will be operated by a 25-horsepower gasoline engine, and the plant will employ about 35 skilled workmen. As there are said to be no stove manufacturing plants in Texas, Mr. Holliday says that he has received assurances from many Houston dealers that they will handle and push the sale of his output, provided the goods are satisfactory.

THE COLE MFG. CO. BUSY.

The Cole Mfg. Co., 3218-3238 South Western Ave., Chicago, report that their plant is working to its full capacity, and that they are making preparations for the fall business which they think will be unusually heavy. Cole's hot blast heater for soft coal, slack coal, lignite or wood is made in two styles and in five sizes. The company says that this stove is proving to be a ready seller wherever introduced. Cole's Radiant heater is provided with a magazine for hard coal and crushed coke. This stove is made in three sizes, and is said to be becoming very popular with the trade. Cole's air-tight stove for wood is made in seven styles and in five sizes. Cole's hot blast range, which the Cole Mfg. Co. is putting on the market, is a range possessing a number of features said to be exclusively its own. This range is constructed on scientific principles, and is guaranteed by the Cole Mfg. Co. to perform efficient service and to give satisfaction under all ordinary conditions. A catalogue may be had for the asking. When writing the Cole Mfg. Co., kindly mention THE AMERICAN ARTISAN.

THE NORTHWESTERN STOVE REPAIR CO.

The Northwestern Stove Repair Co., whose foundries are located at Desplaines, Twelfth and Bunker streets, Chicago, have been running their foundries every working day during the past year, and they say that they now have the largest stock on hand that they have ever had, having made preparations to meet any and all demands for stove, furnace or hot-water heater repairs. The company states that they make every effort to ship goods promptly, and that over 90 per cent of the orders taken by them are filled and the goods shipped the same day as the order is received. They extend a cordial invitation to hardware dealers to visit and inspect their newly equipped foundries, which they say are up-to-date in every respect. Dealers who are not in possession of the Northwestern Stove Repair Co.'s new Catalogue No. 25, are requested to write for one. It will be shipped free with the first order sent for repairs, for the catalogue is too heavy to be forwarded by mail. When writing the Northwestern Stove Repair Co. kindly mention THE AMERICAN ARTISAN.

FOUR-HOLE "MATCHLESS" RANGE.

The four-hole "Matchless" steel range, manufactured by the Landay Steel Range Co., 2621 N. 15th street, St. Louis, Mo., has the same size flue boxes as the company's six-hole ranges, and is acknowledged to be one of the best ranges now on the market. It is provided with an oven 14 inches wide, 12 inches high and 21 inches deep, the top cooking surface measuring 30 x 33 inches. The lids have a diameter of eight inches. There is one open and one closed anchor plate, and one blank plate. The four-hole "Matchless" range is fitted with a duplex grate and will burn wood or coal, other important characteristics being a large warming closet and spring-balanced oven door. "Matchless" ranges, according to the makers, lack none of the qualities which count in the make-up of a good range. Details regarding the construction and special features of these ranges may be had by writing for the Landay Steel Range Co.'s catalogue. When writing for it kindly mention THE AMERICAN ARTISAN.

THE FALL NUMBER OF "OUR DRUMMER."

Butler Bros., Chicago, are now sending out their complete fall and holiday catalogue MC 681, which, they say, is the most important issue of the year of "Our Drummer." Catalogue MC 681 is the "first gun" which Butler Bros. have fired in the holiday campaign. Butler Bros. state that they do not sell no-profit staples, which as commonly handled force prices up on other goods; neither do they handle the many slow-selling items necessarily included in the relatively big lines of the exclusive houses. By concentrating on the goods which sell, Butler Bros. say that they are able to get and to give values otherwise impossible, and to confine their offering to goods that are sellers in retail stores.

Probably the most important feature of Catalogue MC 681 is the "$4.50-$9.00 per dozen" sale, in which are listed goods which Butler Bros. say have never before been offered at 50-cent and dollar prices. These goods include high-grade enameled ware, axes, roasters, hand saws, lamps and cutlery of various descriptions. The hardware and tinware departments of the catalogue contain the usual number of bargains in such articles as sad irons, griddles, coffee mills, nested stovepipe, laundry stoves, coal hods, fire sets, hammers, hatchets, heaters, pans and kettles, drinking cups, strainers, etc. The "specials" listed in the tin and enameled ware department, Butler Bros. say, are not seconds or light weights, but are regular goods offered simply as an example of their policy to furnish the trade each month with a lot of tin and enameled ware specials for "leaders" or money-making purposes. A very attractive assortment of nickel-plated ware is shown in the catalogue and offered at attractive prices. These goods include tea and coffee pots, urns, tea kettles, trays, etc. Many attractive bargains are offered in wire goods and in farm and garden tools. The stove and range department contains the usual number of bargains in this line. The final pages in the catalogue contain some very interesting specialties in "campaign" goods.

A colored insert in the catalogue shows a balloon view of the city of St. Louis, reduced from a drawing eight feet long. In the picture the big distributing house of Butler Bros. in that city is shown up to excellent advantage. The usual number of trade suggestions and selling points are given in the catalogue, two very interesting articles on "Good Merchandise" and "Straight From the Shoulder," appearing on the cover. Catalogue MC 681 will be forwarded on request. When writing for it kindly mention THE AMERICAN ARTISAN.

The Hardware Record.

THE AMERICAN ARTISAN AND HARDWARE RECORD is the only publication containing western hardware and metal prices corrected weekly. You will find these on pages 42 to 47 inclusive.

The Seattle Brass Co. of Seattle, Wash., has been organized with a capital stock of $5,500, the incorporators being H. B. and F. Watson.

The D. L. Fife Cutlery Co. of Minneapolis, Minn., has been incorporated with a capital stock of $50,000, by D. L. Fife, L. P. Fife, and M. O. Luttgren.

The O. V. Ball Cutlery Co., of Rahway N. J., has been incorporated with a capital stock of $125,000, by Fred Knowlton, G. Dean and M. V. Landeen.

LeRoy Smith, a member of the firm of Smith Bros. Hardware Co., Oakland, Cal., has been elected secretary of the California State Retail Hardware Association.

Burchard Bros. Co. of Oxford, N. Y., has been incorporated with a capital stock of $25,000 to manufacture hardware, by Frederick H. Burchard, F. Leonard Burchard and Albert S. Burchard.

The Indiana Steel and Wire Co. of Boyceton, Ind., has started up its plant again and all its departments are now said to be busy. A number of improvements have recently been made and some necessary repair work done.

The Razor Sales Co. of Dover, Del., has been incorporated with a capital stock of $125,000 to manufacture and deal in safety razors, hardware and cutlery. The incorporators of the company are H. D. Kellogg, H. E. Woodward and K. R. Fitler.

An American consul in Russia forwards the name of a concern there that is anxious to get in touch with American exporters of hardware. By writing the Bureau of Manufactures, Washington, D. C., and referring to file No. 2558, the address can be obtained.

John B. Howatt of Sterling, Ill., is at the head of a company which will erect a plant at Sharon, Pa., to manufacture barn door hangers and hardware specialties. Two brick buildings and one frame building are now in course of erection. The company is capitalized at $75,000.

A new type of woven wire fence in which the knot where the meshes are secured is said to possess great rigidity, will be manufactured by the Birch Foundry Co. of Crawfordsville, Ind., a machine having been designed specially for the manufacture of this fence, of which Charles Birch is the inventor.

Representatives of seventeen of the leading sporting goods houses from all sections of the United States, met recently at the Auditorium Hotel, Chicago, and organized the National Association of Sporting Goods Dealers. The new organization is formed largely for protective purposes, and does not take in the manufacturers.

Jacob B. Wirts, one of the oldest retail hardware dealers of Detroit, Mich., died on August 26, after an illness extending over several months. Mr. Wirts was born in Maysville, Ky., in 1847, but moved to Detroit when 13 years old, serving an apprenticeship as a tinner. In the year 1870 he engaged in the hardware business which he had been conducting ever since. He is survived by a widow, six sons and three daughters.

The R. C. Bread Box is a new product of The Republic Metalware Co., Buffalo, Chicago and New York. It has seamless rounded corners, seamless cover, presents an attractive appearance, and is said to be sanitary and very easily kept sweet and clean. This bread box is of substantial construction, and is said by The Republic Metalware Co. to be a trade winner. When writing The Republic Metalware Co. concerning this bread box kindly mention THE AMERICAN ARTISAN.

Joseph D. Willis, at one time a very prominent hardware man of Brooklyn, N. Y., died at the home of his son in Mount Kisco, N. Y., on August 24, of paralysis. Mr. Willis had been a resident of Brooklyn since the year 1840, and started up business in that city as a hardware merchant in 1850, continuing the business until 1878 when his sons succeeded him. Mr. Willis was born in 1825 at North Hempstead, L. I., and was well known in Brooklyn as a man of business integrity.

L. S. Tyler, for four years secretary of the South Dakota Merchants' and Hardware Dealers' Association, died suddenly at Sioux Falls on August 17 of heart failure. The deceased was elected secretary of the South Dakota association in 1904, and for a number of years prior to that time he conducted a store at Harrisburg, S. D. Mr. Tyler was largely instrumental in organizing the South Dakota Retail Merchants' Insurance Co., of which he was the secretary up to the time of his death.

The "Enterprise" food chopper, made by The Enterprise Mfg. Co. of Pennsylvania, Philadelphia, Pa., is provided with a capacious hopper which is said to hold more than it really appears to be capable of holding. The mechanism of this food chopper is said to be as nearly perfect as it is possible to be. Four knives are furnished with each machine. The company has just issued its 1908 catalogue, which will be forwarded to the trade upon request. When writing for it kindly mention THE AMERICAN ARTISAN.

Mr. H. Van Newkirk, who for many years was connected with the Russell & Erwin Mfg. Co., at Philadelphia, and who for the last four years had been treasurer and manager of that concern in New York City, is now connected with the New York branch of the Peck, Stow & Wilcox Co., Southington, Conn., manufacturers of hardware and tinners' tools. Mr. Van Newkirk's many friends in the trade will be pleased to learn that he has made such satisfactory connections, and they will wish him the success that he so well deserves.

The Wyeth Hardware & Mfg. Co., of St. Joseph, Mo., will erect a six-story brick building, costing, it is said, $70,000. It will measure 85x140 feet. "We are making this addition to meet the growth of our business," said H. Wyeth, president of the company. "Our quarters have been congested for several years, and we have been figuring for some time on increasing our facilities for handling the business." The Wyeth Hardware & Mfg. Co. was established in 1860. It has

a capital stock of $300,000, and is one of the largest jobbers of hardware in the country.

AN INTERESTING DISPLAY OF LOCKS.

C. E. Stukas & Son of Clinton, Ia., recently got up a lock display for their window which, they say, attracted more attention than anything they had put in the window for a long while. The interest that the display created was due to a large extent, C. E. Stukas & Son think, to the fact that locks are not exhibited in show windows to the same extent that other lines of hardware are. C. E. Stukas & Son ran an advertisement in their daily paper every day while the display was on, changing the copy with each issue, the results achieved being so good that they say they will repeat it again in the near future.

The window, a view of which is shown herewith, was 6 feet 6 inches wide by 6 feet 6 inches deep, lined up with mirror plate at one end opposite the entrance to the store. The entire window space was enclosed with three sashes about 3 x6 feet each, two being used for the background, the one next the store entrance being hung on weights. The space above the mirror was covered with green burlap.

Window Display of C. E. Stukas & Son, Clinton, Ia.

Speaking of the display, C. E. Stukas & Son said: "The window attracted more attention than anything we ever devised, many people remarking that it was the best display of locks and hardware that they had ever seen. We made sales to a number of people who were looking for high grade locks, and we made sales for some new jobs that we never expected to get. The lock company helped us in getting out some samples and these were mounted on hardwood boards 12 x 15 inches in size, each board containing a number of pieces from one design, so that any one could see how the locks would look when mounted on the doors. In this way the different finishes as well as the designs could be compared and understood. Back of each sample board was a support that made the boards stand up like easels. Neatly printed cards were attached to the boards telling the name of the design and the finish of the locks."

SECRETARIES OF RETAIL HARDWARE ASSOCIATIONS MEET.

A conference of the secretaries of the retail hardware associations of the central west was held on August 28 and 29 at the office of the Iowa Retail Hardware Association, Mason City, Ia , there being present secretaries of state associations as follows: L. D. Nish, Illinois; C. A. Peck, Wisconsin; M. S. Mathews, Minnesota; C. N. Barnes, North Dakota; H. E. Johnson, South Dakota; J. F. Barr, Nebraska; F. D. Kansteiner, Missouri; A. R. Sale, Iowa. At the request of the secretaries, president P. C. DeVol of the Iowa Retail Hardware Association, of Council Bluffs, and president S. R. Miles of the Iowa Hardware Mutual Insurance Association, attended the conference. At the opening session matters relating to hardware mutual insurance were taken up and discussed. The secretaries of four insurance associations who were present presented very encouraging reports relative to the growing demand for mutual insurance policies and reported $12,000,000 of insurance now in force.

The secretaries of the various hardware associations represented at the meeting made some changes in the dates for the annual conventions to be held during the coming year. Following are the dates on which the state conventions will be held: North Dakota, Jan. 26-29; Missouri, Feb. 2-5; Wisconsin, Feb. 3-5; Iowa, Feb. 9-12; Nebraska, Feb. 16-18; Illinois, Feb. 17-19;

Minnesota, Feb. 23-25; Ohio, Feb. 23-25; South Dakota, March 2-5.

Considerable attention was given to the formulating of plans for conducting hardware exhibitions, and other features of general interest were discussed. It was decided to make the conference of the secretaries an annual event, the meetings to be held prior to the fall campaign of the convention work, and in accordance with this plan A. R. Sale of the Iowa association was elected president and J. F. Barr of the Nebraska association, secretary. The secretaries present at the meeting were unanimous that much good had been accomplished by their getting together. A supper, trolley ride, boat ride, and a visit to the cement plant at Mason City were features of the entertainment program provided for the secretaries during their stay in Mason City. Next year's meeting will probably be held in Minneapolis in August or September.

CATALOGUES FOR COUNTRY HARDWARE RETAILERS.

THE AMERICAN ARTISAN has of late been receiving a number of inquiries concerning the advisability of retail hardware dealers in country towns issuing catalogues, it having been suggested that under certain conditions the issuing of catalogues by country dealers might be a paying proposition. The subject is one that has created not a little interest among the trade in all sections of the country, and with a view of obtaining definite information as to what extent and with what success catalogues are being issued by country merchants, THE AMERICAN ARTISAN invites its readers to send in their views upon this important subject, so that publication may be given them. Any dealer who may have a copy of his catalogue to spare, would confer a favor upon THE AMERICAN ARTISAN by forwarding it, together with any information upon the subject that might prove of interest to the trade. Names and addresses will be withheld if so desired.

How J. M. Davis & Sons Advertise.

Apropos of the subject of hardware merchants in country towns issuing catalogues, J. M. Davis & Sons of Oakland, Md., say that no one doing business in a small town has given the subject of advertising more thought than have they, and they believe that their plan is the most effective for those who are willing to do the work. THE AMERICAN ARTISAN takes pleasure in publishing the following article explaining the plan of advertising as adopted by J. M. Davis & Sons, and in reproducing in reduced form a sample of one of their advertisements. J. M. Davis & Sons are firm in the belief that hardware dealers in small towns can increase their trade by issuing a catalogue or house organ from time to time advertising the various lines handled, as their communication will show.

HOW TO ADVERTISE.

"No question has been discussed more by all classes of trade than the question of how to advertise, and one would naturally think that there is very little left to be said along this line that would be of any benefit or that would interest the hardware trade. As hardware dealers we have tried most of the plans that are in general use and find almost any plan better than none, for without it you have very little chance to reach out and draw the trade, especially when you consider that all lines of business are advertised to-day as never before.

WHAT PLAN TO ADOPT.

"The plan to adopt depends on the class of trade and local surroundings, but for the average dealer in small towns and especially where their trade is largely with the farmers, we do not think there is any plan that is as effective as the publishing and sending out to your trade a house organ of your own publication. Three years ago we adopted the plan of publishing a house organ and advertising the various lines we handle, mailing same direct to our trade several times during the year, put up in a nice pamphlet form of 32 pages. This has done more to increase our trade and place us before the public than any plan we have tried, and after three years of experience we would not think of changing to any of the plans used by us heretofore.

ADVANTAGES OF A CATALOGUE.

"First—Your own publication goes direct to the trade.

"Second—You not only advertise your general business but all your specialties.

"Third—It is less expensive for the amount of advertising than can be accomplished by local advertising.

"Fourth—You have the advantage of talking direct to the consumer in a way that brings him in close touch with you, and of making him feel that it is to his interest to buy at home.

"Fifth—It is the most effective plan to meet the catalogue buyer, not only in advertising your own lines, but by publishing articles setting forth arguments against catalogue buying in your favor.

"Sixth—Catalogue houses are considered not only the best, but the most effective advertisers known to the trade; if the plan is good for them, why not for us?

"Seventh—Manufacturers and jobbers stand ready to help the dealer that has his own publication, by furnishing electrotypes, printed circulars, and rendering him general assistance.

"Eighth—The more you push your lines by advertising, writing articles of interest to your trade and making your influence felt in the community in which you live, the larger your trade will become. How can you do it without a house organ?

"Ninth—Nothing succeeds like success. If you have not already done so, try a publication of this kind and see how it will broaden your views and the close connection you will have with the manufacturers, jobbers and consumers.

HOW TO PREPARE A HOUSE ORGAN.

"The first point to consider is what amount you are willing to spend in advertising. Two per cent of the amount of the goods bought is the rule that many dealers have adopted. This, of course, depends on what plan you adopt, and the access you have to printing offices. So far as possible we believe it would be to your interest to contract with your home printers, especially, if you are in a small town. This creates a good feeling and often, as in our case, leads to the copying of articles from your publication in your town or county papers. This not only advertises you to a large extent, but advertises and creates a demand for your paper free of cost.

SIZE AND STYLE.

"The size and style depends on the amount of advertising you intend to do and the lines you expect to advertise. A four-page circular of good size, with letters to the trade on the first page and advertisements on the balance of the pages, nicely illustrated by the use of electrotypes that you can secure from the manufacturers whose lines you are selling, has proven to be one of the best and cheapest plans for the small dealer. For the larger dealer a monthly, bi-monthly or quarterly publication, nicely illustrated with the various lines handled and new goods received from time to time, put up in catalogue form and mailed regularly to a carefully selected list of customers and friends, will exert a greater influence and go farther to offset catalogue buying than any other form of advertising.

THE EXPENSE.

"Circulars can be furnished by the thousand very cheaply, but a 20 or 30-page magazine or bulletin including cover, weight not to exceed two ounces, so that it can be mailed for one cent, and size not to exceed 7x9 inches, you furnishing all the data and cuts for illustrating, should be printed, folded and stitched ready to mail, for $25 to $35 for the first thousand, and from $15 to $25 for each additional thousand. Where monthly publications are issued, you will find quite a number of advertisements, covering ice cream freezers, screen doors, oil stoves, gas ranges, spring and fall goods, that you will want to reproduce and change very little. This is to your advantage and should be taken into consideration by the printer when contracting.

MAILING LIST.

"This can be compiled in various ways, and it depends on your location. In small towns where papers are published, the editors can usually furnish a list that will take in a large class of the best people. Mailing list on free mail routes, where they can be obtained, is a plan that some have used, especially catalogue houses. Another very practical way is to select a leading man or farmer from any section that you want your advertising to cover, and for a small compensation you can usually get a list of postoffice addresses of the people in that section of the country.

MANUFACTURERS' PRINTED MATTER.

"After your own advertising and publication has gone so far as to bring the customer or inquirer to your store, then it is that you want to use every argument possible to make the sale and to place in the hands of your customers printed matter as furnished by the manufacturer to clinch the argument already set forth, and to more forcibly impress on his or her mind the many good qualities of the article in question. This is especially true of new goods, and it has the effect of keeping you in the lead on new goods with your trade.

MANUFACTURERS' CO-OPERATION.

"Manufacturers can assist the local merchant by writing advertisements of their various lines, placing one or more each week or month in the hardware publications, as they are published, and furnishing electrotypes to those who are willing to use the same in space they have arranged for in their local papers or organs of their own. Merchants, as a rule, cannot write their advertisements as well as the manufacturer, who is fully acquainted with his line of goods and its many advantages. We are glad to say that quite a number of manufacturers are furnishing the dealers with advertisements, but the practice ought to be more general. As a result merchants will not only advertise more largely, but will necessarily have to carry larger and better stocks. This will have the effect of keeping local trade from sending away for many lines of goods now furnished and advertised by catalogue houses.

"This article is based upon our own experience as hardware merchants in a small town, feeling the necessity of some plan to offset the influence of the catalogue houses and city department stores, and while the plan has been a success we find it necessary to adopt many of their methods. A good

Sample advertisement used by J. M. Davis & Sons in their Bulletin.

and well-selected stock of goods, suited to your trade, is required, and in many lines some cheap goods. This is especially true in five and ten-cent household goods. This permits you to make comparisons and to advertise some low-priced articles."

Yours very truly.

J. M. DAVIS & SONS.

Oakland, Md., August 12, 1908.

Letter From Michigan Merchant.

TO THE AMERICAN ARTISAN:

Inasmuch as we are having so many inquiries from merchants who seem to be vitally interested in a catalogue and price list for the retail merchant to the consumer, and also in view of the fact that many merchants look at this work as almost impractical, I would like to convey to their minds through your journal the illusion that I think is somewhat exaggerated in their beliefs on this important subject, if you will allow me the space.

First of all, let me say that I have proven by practice and actual demonstration that it is thoroughly practical (by merchants combining and co-operating among themselves) not only to issue and distribute a descriptive catalogue and price list to the consumer, but also to arrange with manufacturers and jobbers beforehand for the lines of merchandise listed therein. The manufacturers and jobbers are frequently willing to furnish electros and cuts of the goods they furnish.

What line of goods have we taken, you ask? We have started in to take those lines that are universally used, and on which we have lost a large portion of our trade—such items as sewing machines, washing machines, etc. We are also taking the lines that are advertised extensively to the consumer through household journals, farm journals, etc.

If arrangements with the merchants can be made, and the advertising, printing, etc., done co-operatively, which is the only way it can be done economically, what is there to prevent any merchant taking up the lines of goods that we have arranged for, which would of necessity be already advertised in our catalogues, folders, flyers, pamphlets, etc.? In this way we put the merchant on an easy road not only to present the merchandise to the consumer, but also to purchase the same on a most economical basis, as by becoming one of our members at $50.00 per year, payable quarterly, the members get all there is in the merchandise handling as well as other information from time to time that is invaluable.

Of course the advertising privileges can also be obtained by paying extra for actual mechanical work, which is about $50.00 per thousand for a 50-page catalogue, a larger book costing less in proportion to the number of pages. Our work is all kept standing, so that we may add to it or change it from time to time, as necessity requires.

The prices in these catalogues are well considered before they are established, and the cuts and descriptions are well explained, and it is surprising, even on sewing machines, how our trade has increased. Of course it must be understood that we must meet and do meet legitimate competition in this arrangement, from whatever source. We have practical retail and wholesale men on the work and we are in this work to stay.

For two years previous to April 1 last we had sold but two sewing machines. Since April 1, when we began to go after the machines and other lines of business, we have sold ten machines, just ordered five more and have good prospects in view. The fact that we are going after the trade with catalogues and prices is going to bring back to us the trade that rightfully belongs to us. Therefore everyone of us must have the right goods, the right price to meet existing competition, and we must let the people know it. It must be done. It can be done and we will continue to do it. We must have what belongs to us by right of our position as merchants.

C. E. PIPP,

Prest. Co-operating Merchants' Co.

Otsego, Mich., Aug. 20, 1908.

RETAIL HARDWARE DOINGS.

NEW FIRMS AND INCORPORATIONS.

Tahoka, Texas.—Tahoka Hardware Co. incorporated with a capital stock of $10,000.

Albany, N. Y.—G. V. and F. W. Cameron have incorporated with a capital stock of $50,000 to deal in hardware supplies and paints.

Clinton, Okla.—The Clinton Hardware Co. has been incorporated with a capital stock of $5,000.

Hibbing, Minn.—The Hibbing Hardware Co. has been incorporated with a capital stock of $50,000.

Brookville, Miss.—City Hardware & Furniture Co. incorporated with a capital stock of $7,500.

Neillsville, Wis.—The Cash Hardware Co. has been incorporated.

Lake Park, Ia.—The Triggs Hardware Co. has been incorporated with a capital stock of $20,000.

BUSINESS CHANGES.

Clinton, Mo.—A. F. Meyer has purchased the Haysler Hardware Co.'s stock.

Hartford, Mich.—Mr. Canhod has purchased the hardware store here.

Kewanee, Ill.—Forrest Kelly and Edward Kewley have purchased Arthur Aby's hardware stock.

Monroe, Ind.—Jeff Liechty has purchased the hardware stock of John F. Hocker and Benjamin Smith.

Crab Orchard, Neb.—George Shick has purchased the hardware stock of Snyder & Shivers.

Clarksville, Mo.—J. H. Kissinger has sold his hardware stock to Howard C. Hunter.

Canton, Ill.—Ross Smith has traded his hardware store to Frank Roberts.

Quincy, Wash.—The Quincy Mercantile Co. has disposed of its hardware business to the Sunnyside Co.

Chappell, Neb.—Wertz Bros. have sold their hardware, lumber and coal business to Anderson & Peterson of Marquette.

MISCELLANEOUS.

Maysville, Ky.—The Frank Owens Hardware Co., is reported in bankruptcy.

Pine Bluff, Ark.—H. C. Thompson & Son's hardware store was damaged by fire.

Texarkana, Tex.—The hardware store of J. E. Benjamin was damaged by fire.

Munger, Mich.—Schnettler Bros.' hardware store was burglarized.

White Salmon, Wash.—The hardware store of McClintock & Simpson was burglarized.

Winchendon, Mass.—The hardware store of Mason & Parker was damaged by fire.

Orient, Ia.—J. T. Dalby's hardware store was burglarized.

Kenyon, Minn.—John Tornblad has moved into his new hardware store.

Advertising Department

Our readers are invited to send in copies of their advertisements in the local press for criticism. All communications should be addressed to the "Advertising Department" of THE AMERICAN ARTISAN.

The Mohr-Jones Hardware Co. of Racine, Wis., have a very good advertisement, a reduced reproduction of which is shown herewith. The ad is devoted exclusively to asbestos sad irons and to tea and coffee pots. The space has been utilized to good advantage and there is no evidence of crowding. The ad is rendered especially attractive by the use of boldface type, this style being especially desirable where prices are quoted. That the sad irons advertised will give satisfaction to the users, is concisely told in the lines—"A Hot Iron, a Cold Handle." Such lines as these in any advertisement tend to inspire confidence in the reader and are certain to bring about good results. The Mohr-Jones Hardware Co. in calling their establishment "Racine's Leading Hardware Store," have done something for which they are to be commended. Some such distinctive appellation as this may always be relied upon to make a good impression upon prospective customers, when it can be backed up. The advertisement appeared in the *Racine* (Wis.) *Daily Journal* of August 24, and took up five inches of space, two columns wide.

* * *

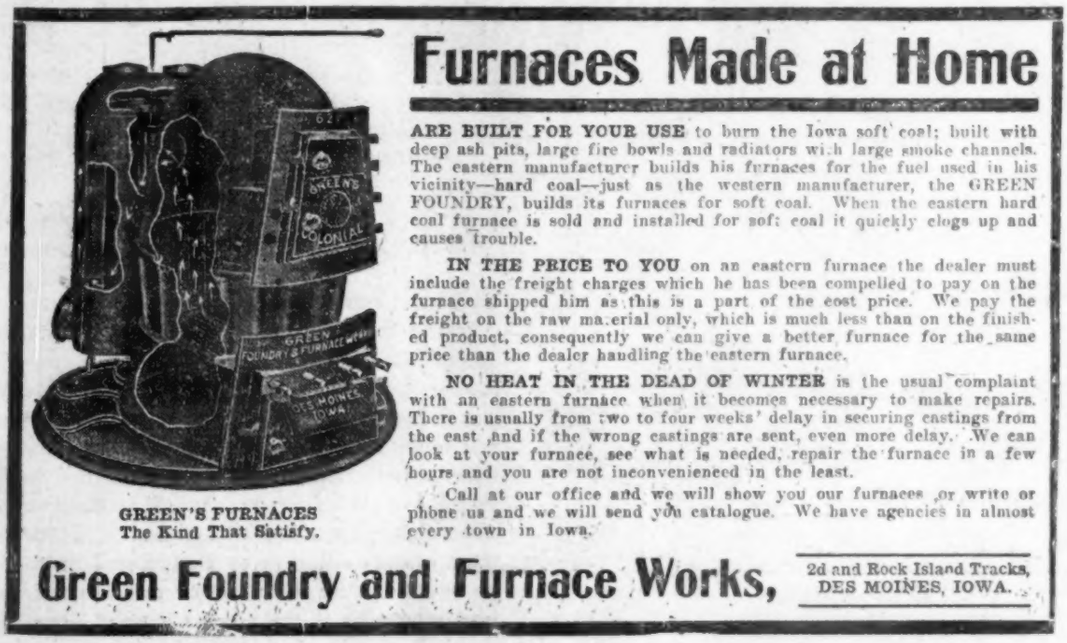
Frequently good results are obtained by offering a special sale on a big lot of one certain article, the price on which is not generally known.

* * *

Many a man keeps his business small merely because he never gets the courage to cross the bridge between planning and doing.

* * *

The Green Foundry and Furnace Works of Des Moines, Ia., have a very excellent advertisement, which appears herewith in slightly reduced form, and though it contains a lot of matter it does not present a congested appearance. The text shows evidence of careful preparation and it is written in clear, convincing English. An advertisement of this style can be depended on to produce satisfactory results, for arguments of the most cogent character are advanced why Green's furnaces, the goods advertised, should be used. The ad possesses an individuality which should be in evidence in every advertisement. It is always desirable, whenever possible, for an advertiser to make some special claim for his goods or to mention some distinctive feature which will appeal to prospective buyers of reliable merchandise. The Green Foundry and Furnace Works have evidently realized the truth of this statement. The ad appeared in the *Des Moines* (Iowa) *Register* of August 24, and occupied four inches of space, three columns wide.

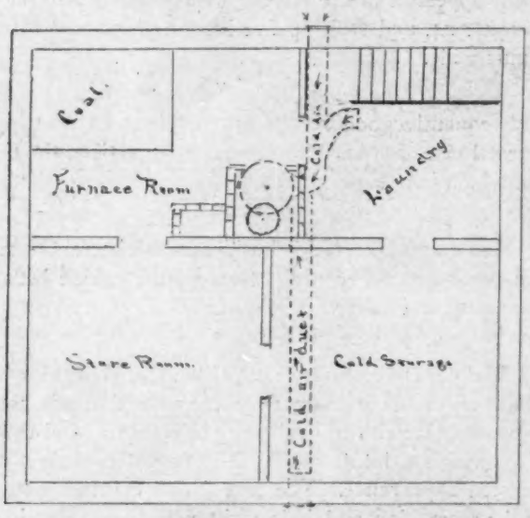


Heating and Ventilating

UNCLE CHARLEY'S REPLY TO WARM-AIR FURNACE PROBLEM.

To The American Artisan:

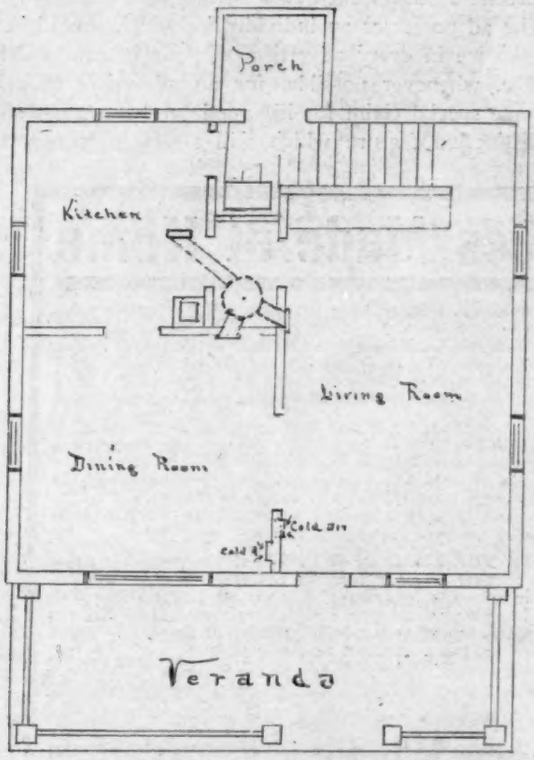
I have a furnace deal on in this place that I would like some of the readers of your paper to figure on and



Basement

tell me how the plant that I am about to describe will work.

A friend of mine is going to build a house. He is

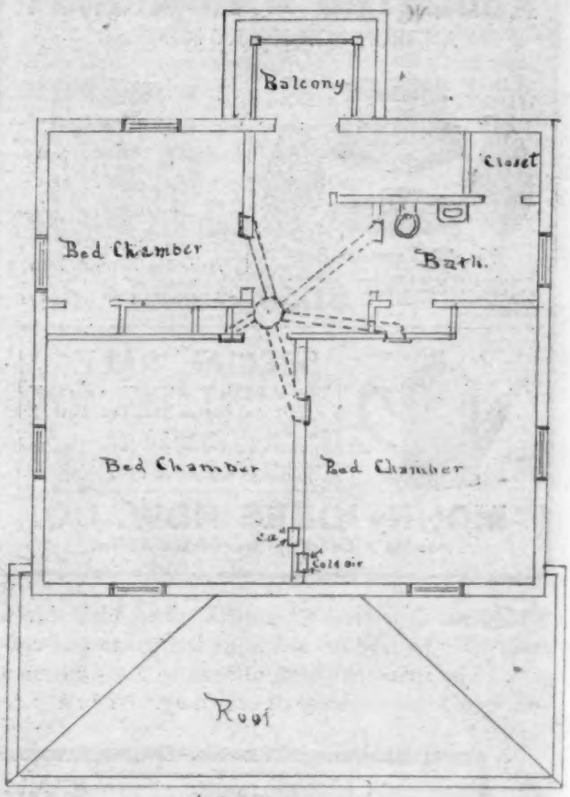


1st Floor Plan
1/4" Scale

partial to the warm-air system of heating and he is very anxious to try such a plant, as he believes it would suit his purpose better than any other form of heating. I drew up the accompanying sketches for him and he seems to be quite enthusiastic over the plan.

He wants to brick in a furnace in the basement as shown in the sketch, and to enclose an open tank to put water in and to have a manhole, or whatever it is called, so that he can get in and out when necessary. He also wants to carry the cold air across the basement ceiling to come in at the side of the furnace.

Instead of several warm air pipes, he wants to run one large one off the top and decrease it above the first floor. He will build his floor joists to suit the pipe runs, but the idea is to branch off to each room from the main pipe. I hardly know what to say about it, for it is a new thing to me, so I refer it to you. I be-



2nd Floor Plan

lieve, however, that it would be O. K., and he is very anxious to try it.

I trust that you will be able to enlighten me upon the matter.

W. D. Callan.

Duluth, Minn.

To The American Artisan:

I have been looking over plans of building for Mr. Callan of Duluth. There is nothing very new about having a single connection to furnace. Many years ago in New York it was customary to build one brick flue from sub-cellar to about two feet above the top floor. The furnace stood in the bottom of the flue and just above each floor there would be openings to each room through a side-wall register. On the first floor the openings would be to the hall and front and back parlors. On the other two or three stories the openings would be to the front and rear large chambers and hall, but they had the registers near the floor.

When registers are placed near the ceiling the cold air returns must have an area equal to that of the hot air pipes, or the floor will be cold and the ceilings hot. My impression is that the outside cold air duct will have to be dispensed with. It is not necessary. For

fresh air, open a window as you would have to do with hot water or steam. The pipe to kitchen can be shortened.

In one chamber two warm air pipes are shown; one can be dispensed with and the other shortened. I think this plan will be satisfactory if the return ducts are sufficiently large and properly constructed. But suppose it is satisfactory, what advantage has this over the usual method?

UNCLE CHARLEY.

Chicago, Ill., Aug. 2, 1908.

REMOVING LIME FORMATION FROM FURNACE PIPES.

To THE AMERICAN ARTISAN:

I noticed in THE AMERICAN ARTISAN of August 29 that Melvin F. Ives, 352 Cass avenue, Grand Rapids, Mich., wishes to be informed of something that he can use to remove lime formation from furnace pipes caused by hard water, without injury to the same.

The removing of lime incrustation from pipes, hot water backs, water jackets, etc., is more or less a difficult job. Muriatic acid when used cuts the lime and dissolves it, but is liable to cut deep into the iron and to rust it. A small amount of common washing soda used in water after the acid has been washed out will neutralize the acid, but care must be taken to wash the soda out of the water, as soda remaining for any length of time will rust the pipes. The pipes or waterback should be filled with muriatic acid, and allowed to stand for several hours. Common crude oil mixed with the water, it is said, will have a loosening effect on the lime formation. The oil should be poured into the water, say a pint or more, and boiled until practically all the water has been evaporated. As the level of the water falls the oil follows, and has a very considerable loosening action upon the lime. I am informed that a device has been put upon the market which will prevent the clogging-up of water-backs. Lime deposits can be prevented, it is said, by the use of oak tan bark.

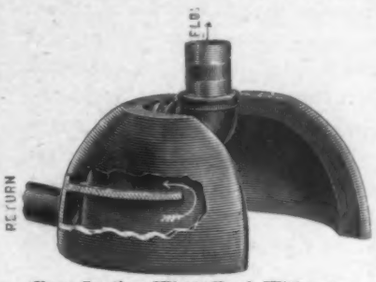
HENRY MEYER.

Beckley, W. Va., Aug. 31, 1908.

"CHAMPION" HOT-WATER COMBINATION BOILERS.

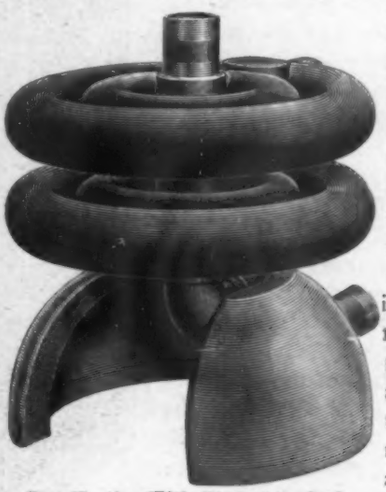
It has been demonstrated that some hot-air furnaces fail to heat all of the rooms in a building in which they are installed. Notwithstanding that they may have sufficient capacity and that sufficient fuel may be used, the heated air is sometimes with difficulty forced through pipes leading any considerable distance from the furnace. In order to overcome this undesirable feature, Frank D. Stolz, 156 Webster Ave., Chicago, has put on the market the "Champion" Hot Water Combination Boiler, by means of which, when applied to any furnace, all the rooms in the building can be heated by hot water radiation and an equal distribution of heat throughout the building obtained, it is claimed. Frank D. Stolz says that in most cases where "Champion" hot water combination boilers are applied a considerable saving in the amount of fuel used has resulted. These boilers, which are made in sizes to fit any style of hot-air furnace, have a capacity of from 50 to 700 square feet of radiation.

The first illustration represents the base section when used without ring sections. The construction of this section permits its being placed directly at the top of the fire, in which position its large surfaces are subjected to the strongest effect of the fire, making it a powerful heater. The opening in front of the boiler is placed opposite the feed door opening to permit the addition of fuel to the fire. The opening in the top allows the flame and reflection of the fire to come into contact with the surfaces of the furnace, thus detracting little from the hot-air capacity of the furnace.

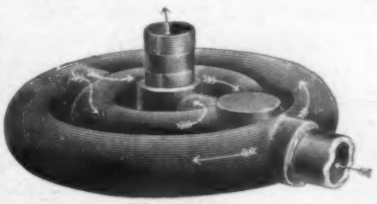


Base Section When Used Without Ring Sections.

The second illustration shows the base section with rings attached. The opening in the top of the base section permits the flame and reflection of the fire to come into contact with the surfaces and through the openings in the ring sections, making it a powerful and effective heater. One or more ring sections can be added for additional capacity, to be determined by the amount of hot water radiation to be used. The sections are connected with extra heavy threaded nipples, making all joints absolutely tight.


Base Section With Rings Attached.

The ring section is shown in the third illustration. The fire passing through the spaces between the rings in each section and over their large surfaces, permits the direct action of the fire to come into contact with each section added.


Ring Section.

"Champion" hot water combination boilers, which are adapted for use with all kinds of fuel, are tested to 100 pounds hydraulic pressure before leaving the factory of Frank D. Stolz. They are guaranteed not to leak and to increase the heating capacity of any furnace. A booklet giving further information about these boilers may be had by addressing the manufacturer as above indicated. When writing kindly mention THE AMERICAN ARTISAN.

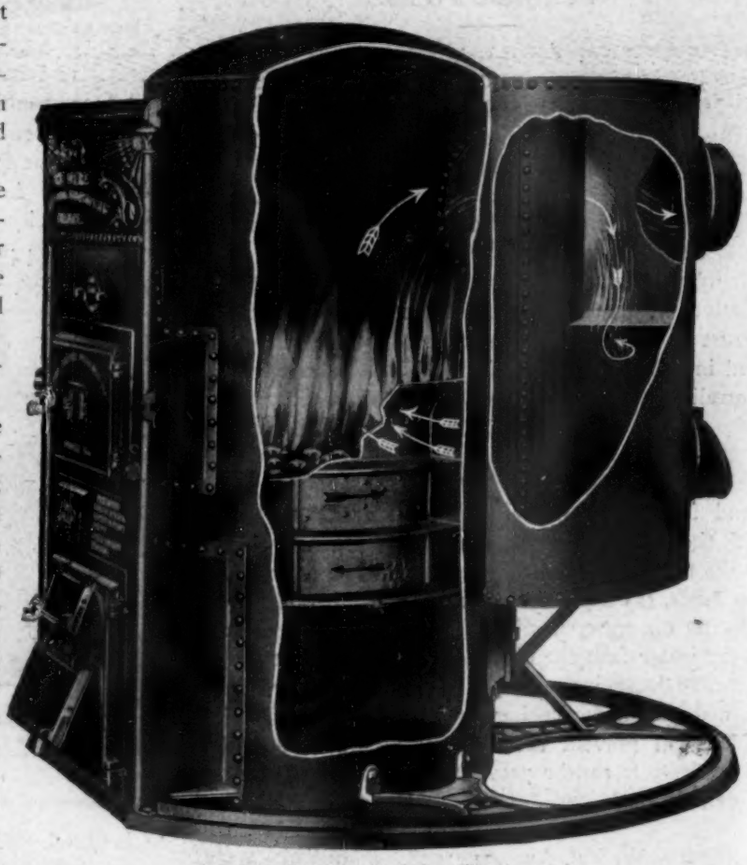
THE WEIR PORTABLE FURNACE.

The Meyer Furnace Co. of Peoria, Ill., are said to be having a very successful season with their Weir portable furnace, an interior view of which is shown herewith. This furnace is made in five sizes, and the manufacturers assert that it can be cased up quicker than any other furnace, for the front being complete to top ring, no cutting or piecing of iron is necessary. The fire-door measures 10x17 inches, having a capacity for large blocks of coal or wood. The ash-pit door is 15x16 inches, with an ash-pit 18 inches high and full diameter of the furnace. The fire-pot being sectional, can be taken out and replaced through the feed door, without disturbing any other part of the furnace. The fire-pot is so constructed with channels that the air, introduced and heated for the purpose of promoting combustion, must pass around the entire fire-pot a number of times before it is discharged, and then in a diffusive manner over the entire fire. This is said to cause the fire to burn from the top down and from the circumference to the center, economizing fuel and giving quick results.

The Meyer Furnace Co. says that the Weir is really a double furnace. Combustion takes place in the first or main drum, which alone is said to possess a great heating surface. This drum is constructed of one sheet of boiler plate, into which is inserted the heavy dished head, all riveted with heavy rivets, after which it is thoroughly calked until water and gas-tight. The bottom of the ash-pit is of the same material, and is put in in the same manner. The main drum and radiator of the Weir portable furnace are connected by a flanged coupling, packed with an asbestos gasket in the same manner as large steam connections are made. The course of the products of combustion is said to be such that the heat is brought directly against every part of the outside, so that there is said to be not only long retention of the heat inside, but an effective use of it by contact with the air chamber. The Weir furnace has no joints, it being made of practically one sheet of mild low carbon boiler plate, said to be absolutely impervious to gases at all temperatures. The Meyer Furnace Co. has recently issued their catalogue No. 15, in which this and other Weir furnaces are elaborately described and illustrated. It may be had on application. When writing for it kindly mention THE AMERICAN ARTISAN.

THE FLORAL CITY CAPITOL FURNACE.

Like all Floral City furnaces manufactured by the Monroe Foundry & Furnace Co., Monroe, Mich., the Floral City Capitol furnace has embodied in its construction the excellent features of an up-to-date furnace. Its most important feature is probably the dome or body with the outer return flue, or horse-shoe radiator. The dome is high enough to give an extra large combustion chamber, and the furnace is low enough to fit in shallow basements. For durability, economy, power and satisfactory service, Floral City furnaces are regarded as equal to any that are now on the market. They are all heavily constructed and are guaranteed to do all that the makers claim that they will do. The Monroe Foundry & Furnace Co. has recently issued a catalogue of their extensive line of furnaces, which may be had for the asking. When writing them kindly mention THE AMERICAN ARTISAN.



Weir Furnace (Interior View).

THE "CROWN" WARM AIR FURNACE.

The low-down "Crown" warm-air furnace, manufactured by the March-Brownback Stove Co., Pottstown, Pa., is becoming more and more popular among furnace dealers. The various parts of this furnace are thick and staunch, and the maximum amount of heat is said to be obtained from the minimum amount of fuel consumed. The "Crown" furnace is modeled upon scientific lines and is, what may be termed, a first-class furnace in every respect. The March-Brownback Stove Co., in placing this furnace upon the market have realized the importance of constructing a furnace which will not only perform its heating functions in an admirable manner, but will do so with a minimum amount of cost and attention. Literature descriptive of March-Brownback furnaces may be had

for the asking. When writing the company kindly mention THE AMERICAN ARTISAN.

THE BOYNTON SQUARE POT STEEL DOME FURNACE.

The Boynton square pot steel dome portable furnace, is said by the makers, The Boynton Furnace Co., 207-209 Water street, New York, and 147-149 Lake street, Chicago, to be the best example of the down draft type of wrought metal furnace now on the market. This type of furnace has an unusually large combustion chamber which presents to the air in circulation a large area of direct heating surface. Very extensive additional radiating surface is comprehended in the two down-take flues at the side, the "horseshoe" flue at the bottom and the up-take flue at the back of the furnace, through all of which the hot gases of combustion must pass when the direct draft damper is closed. The general excellence of Boynton furnaces in the matters of spacious ash-pits, door mountings, absence of complications, modern design, etc., is maintained in the Boynton square pot steel dome portable furnace. The wrought metal work of this furnace is made of heavy gauges of what is said to be the best steel plate. The Boynton Furnace Co. furnishes a special grate for this furnace when it is desired to burn wood. When seeking further information concerning this furnace kindly mention THE AMERICAN ARTISAN.

PARAGRAPHS.

The Harris Smokeless Furnace Co. of Nashville, Tenn., has been incorporated with a capital stock of $20,000 by J. B. Harris, Geo. N. Tillman, S. A. Cunningham and others.

The Quick Heater Co., of Indianapolis, Ind., has been incorporated with a capital stock of $25,000 to manufacture water heaters. The incorporators are Wm. E. and John A. Kurtz and H. H. Fulton.

The Michigan Safety Furnace Pipe Co., Detroit, Mich., manufacturers of safety wall pipe and single pipe and fittings in both tin and galvanized iron, are sending out two very attractive blotters the enameled side of which is printed in several colors. On one of the blotters is a picture of "Mr. Osthaus Training the Puppies," while on the other a dog is shown assuming the position of "Attention," while his little bootblack master is admiring his obedience. "We need your business, want it and will take care of it," is the statement made by the Michigan Safety Furnace Pipe Co. on the blotter.

Walter S. Rait & Co., 211-213 Lake street, Chicago, are distributing an advertising novelty in the form of a box of matches, soliciting the investigation of their complete line of warm-air furnaces, in which they claim all the best features known to furnace construction are embodied. On the bottom of the box of matches are enumerated the following styles of furnaces carried by Walter S. Rait & Co. All-cast iron with one piece radiator; cast-iron with double return flue ten-gauge steel radiator with cup joints; cast-iron with all one way ten-gauge steel radiator with cup joints; tubular with heavy cast-iron tubes. It is further stated that Walter S. Rait & Co. carry a full line of all steel furnaces.

Mogul furnaces made by The Portsmouth Stove & Range Co. of Portsmouth, O., are designed to burn hard or soft coal or coke, with no clogging-up of the flues. The company says that this furnace is as easy to manage as an oak stove, and that its heating capacity is as great as any similar furnace now on the market. The casing of this furnace is made of galvanized iron, and its construction throughout is said to be exceptionally substantial. When writing The Portsmouth Stove & Range Co. for literature descriptive of the Mogul furnace kindly mention THE AMERICAN ARTISAN.

OBITUARY.

Edwin Burbank Pike.

Edwin Burbank Pike, president of the Pike Mfg. Co., Pike, N. H., makers of scythestones and other tool-sharpening abrasives, died on Aug. 24, after a few days' illness, the result of an operation for appendicitis. The deceased was born in Haverhill, N. H., in 1845, and at the age of 17 years started out selling whetstones. About 35 years ago Mr. Pike entered the employ of the Enterprise Mfg. Co. of Pennsylvania, Philadelphia, when that concern was in its infancy, later being appointed chief traveling representative of the concern. In 1878 Mr. Pike gave up traveling owing to ill health and went again into the scythestone business with his brother, A. F. Pike, the A. F. Pike Mfg. Co. being formed in 1884, largely as a result of the deceased's untiring attention to business. Five years later owing to increased business, the Pike Mfg. Co. was incorporated with A. F. Pike as president and Edwin Burbank Pike, vice-president and general manager. A. F. Pike died in 1891 and Edwin Burbank was elected to the presidency of the concern, which position he held up to the time of his death. Mr. Pike for a number of years was an active member of the National Association of Manufacturers and the American Hardware Manufacturers' Association. He was a man possessed of a very genial disposition, had always taken a great interest in municipal affairs, and his advice and resources were always at hand when needed. During the latter years of his life Mr. Pike took an active interest in church work. His death will be learned with regret by the trade throughout the country.

Henry L. Niedringhaus.

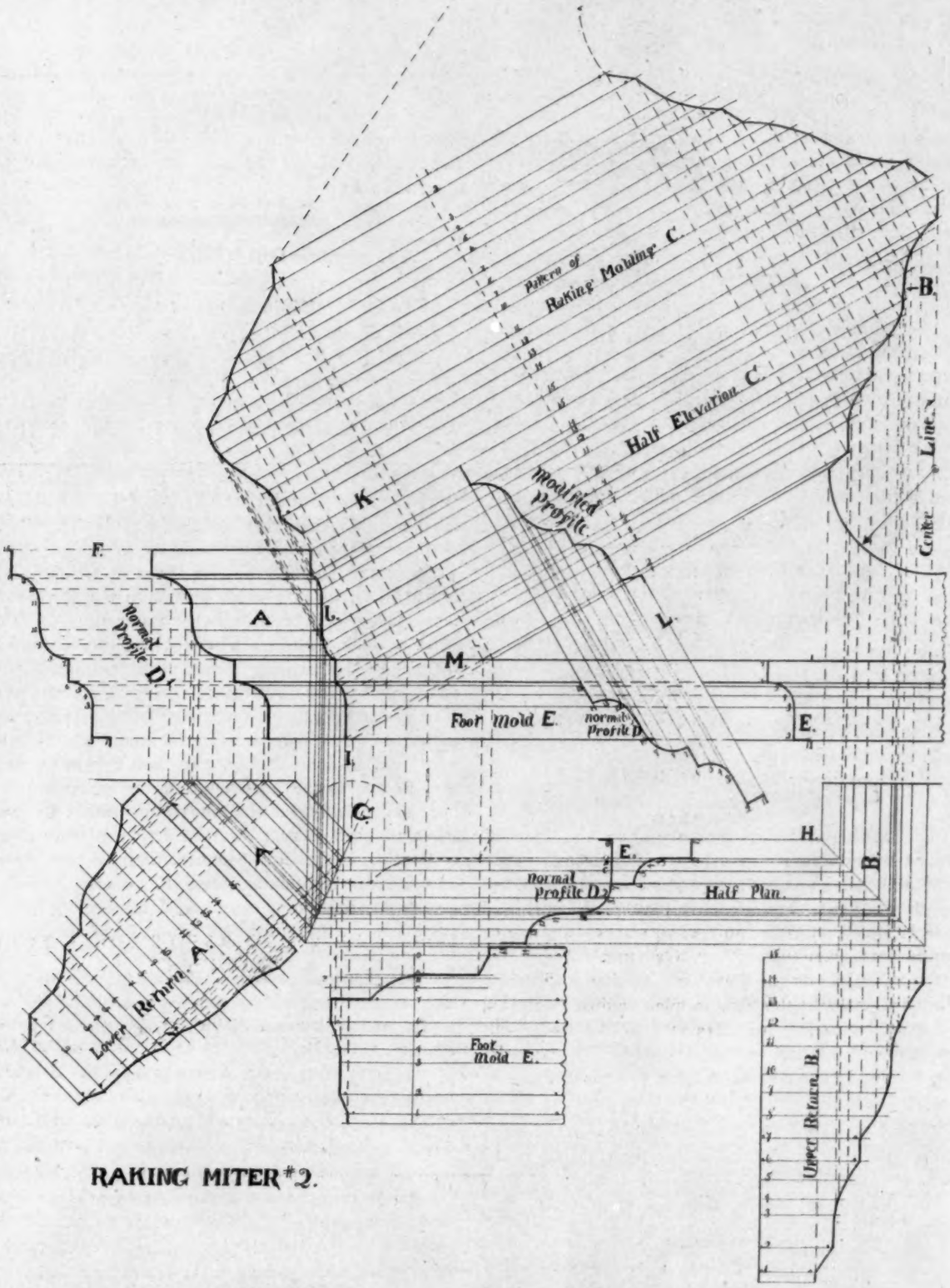
Henry L. Niedringhaus, brother of W. F. Niedringhaus of the National Enameling & Stamping Co., whose death occurred a few weeks ago at St. Louis, died on August 31 in that city at the age of 67 years, his demise being hastened, it is said, by nervous breakdown as a result of his brother's death. H. L. Niedringhaus was active with his brother, W. F. Niedringhaus in the management of the National Enameling & Stamping Co. He was born in Germany, and came to America 57 years ago.

Tinshop

RAKING MITER, NO. 2.

BY G. L. GRAY.

In this drawing is shown how the patterns are obtained when the normal profile is placed in the lower return A, which forms an octagon angle in plan, while the upper return B forms a square miter in plan. It is customary to place the normal profile for the longest moldings, using the modified profile in the short runs. First draw normal profile D 1 for elevation, and space the curved parts into any convenient number of equal parts and draw lines parallel with line F indefinitely. Then draw a plan of rake mold, showing the proper angle of lower and upper returns; place normal profile D 2 in plan as shown, drawing lines from all spaces in profile intersecting miter lines for upper and lower returns G and H; place T square parallel with line I;



RAKING MITER #2.

draw lines from all points in miter line G to lines of corresponding numbers in elevation. Drawing lines through these intersecting points will give the miter line J. Place T square parallel with K; draw lines from all points in miter line J indefinitely. Place T square parallel with center line, draw lines from all points in miter line H intersecting lines of corresponding numbers in elevation. Drawing lines through the intersecting points will give the profile of upper return B. Draw line L at right angles to rake mold and place normal profile D 3 on same, as shown; draw lines from all points in profile D 3 to lines of corresponding numbers in elevation C. Drawing lines through the intersecting points will give modified profile, from which stretchout is taken for pattern of raking molding C. For pattern of upper return B, take stretchout from profile B. For pattern of foot mold E, take stretchout from profile E in plan and drop lines from corresponding numbers in miter line J and M. Drawing lines through the intersecting points will give pattern for foot mold E. For lower return pattern A, take stretchout from normal profile D 1.

GOT THE PATTERNS HE WANTED.

To THE AMERICAN ARTISAN:

I wish to take this opportunity to thank you and my brother "tinks" for patterns for the one-piece chimney cap that I have been looking for. I have received cuts and patterns from all over the country through your valuable paper for the chimney cap, and as it would take me quite a while to write letters of thanks to all those who have submitted patterns through THE AMERICAN ARTISAN, I wish to convey my thanks to them and to you through your paper.

JOHN F. CARTWRIGHT.

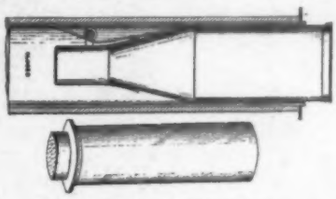
815 State St., Bowling Green, Ky., Sept. 1, 1908.

"TITELOCK" METAL SHINGLES.

"'Titelock' Metal Shingles" is the title of a very attractive booklet just issued by the Milwaukee Corrugating Co. of Milwaukee, Wis., manufacturers of artistic metal ceiling, roofing, conductor-pipe, etc. The booklet is printed throughout in two colors, and is gotten up very tastefully. As is well known, "Titelock" metal shingles are adapted for residences, schools, churches, railroad depots and other buildings, having roofs of three inches or more pitch to the foot. The Milwaukee Corrugating Co. says that these shingles are absolutely water-tight and are much cheaper than other kinds of shingles when the comparative wearing qualities are considered. The side-lock on the "Titelock" metal shingle is so formed that the matching beads are said to be absolutely straight and true to size. The outer flange is pressed to such an angle that after it is inserted in the recess of the adjoining shingle the act of laying the shingle springs it into tight contact at both the top and bottom with the beads positively nested. This construction, the Milwaukee Corrugating Co. says, provides amply for expansion and contraction of the metal. The manufacturers say that "Titelock" shingles require no care to keep them in good condition with the exception of a coat of metal roof paint every four or five years. "Titelock" galvanized shingles, it is said, require no painting unless simply for the purpose of improving their appearance, for they are guaranteed to be rust-proof. The Milwaukee Corrugating Co. will be pleased to forward the "Titelock" booklet upon request. When writing for it kindly mention THE AMERICAN ARTISAN.

THE MEIER CELLAR DRAIN TRAP.

F. W. Meier, Upper Sandusky, O., has put on the market a device which is known as the Meier Cellar Drain Trap, designed to allow all water to flow into the sewer or drain, and to prevent the escape of sewer gas or the backing up of water through the trap into the cellar. The trap is so constructed as to fit into the upper end of a drain or sewer pipe, and is provided with a screen at its mouth to prevent large obstacles from entering the trap. It is said to be a necessity for the overflow drain in a cistern where the water is used for kitchen and drinking purposes. It is provided with an outer section with a flange on it, also an inner brass cone, one end having a strainer and the other end tapering.



The Meier Cellar Drain Trap.

The loose portion of the trap consists of a cup made flaring to fit over the cone and suspended by means of a wire connected with the outer sleve of the trap On this wire the cup can move backward and forward by means of a roller attached to the cup so as to balance it and allow it to move freely. When water is being discharged through the waste system the cup is pushed away from the cone and the water can discharge freely. On the contrary, when there may be a back pressure the cup is driven on the cone and it is impossible for anything to pass it to cause trouble. When writing F. W. Meier for further particulars regarding the Meier cellar drain trap, kindly mention THE AMERICAN ARTISAN.

TIMELY ADVICE TO MASTER SHEET METAL WORKERS.

The regular meeting of the Brooklyn (N. Y.) local branch of the National Association of Master Sheet Metal Workers, was held at 54 Hancock St., Brooklyn, on the evening of September 3, when the reports of the Brooklyn delegates to the Chicago convention were read. President W. H. Ostheimer has sent out the following circular to members of the Brooklyn local:

"While the summer has been an excessively hot one, and business as a whole has been poor, we can consider ourselves fortunate in having weathered the ordeal, with its worries and anxieties. The fall is here, and with it will come business. Let us avail ourselves of its opportunities, make a fair profit on our work, and keep our eyes peeled for the "beat" that is always getting on our books. If we would do this we would have more money in our pockets.

"Do not let your accounts go over 30 days without jog-

ging the people's memory that you need the money. It's all nonsense to be afraid of hurting people's feelings, and you won't lose them if you do good work.

"I note that very few masters give the financial part of their business the proper care, and that's a mistake. Finances are the sinews of war. You may do a fine business, but if you have two-thirds of that business on the books, you are up against it.

"There is a way of getting the money out of your customers, and that is the sugar-coated way—just jolly them, but at the same time keep at them. A polite explanation will smooth the balkiest of them."

NOTES AND QUERIES.

REPAIRS FOR "VANDERGRIFT" WASHING MACHINE.

From A. T. Dailey & Son, Whiting, Ia.

Where can I get repairs for a "Vandergrift" washing machine?

Ans.—Blackstone Mfg. Co., Jamestown, N. Y.

ADDRESS OF NEVER BREAK STEEL RANGE CO.

From The J. C. Lewis-Leykom Co., Antigo, Wis.

Where is the Never Break Steel Range Co. located?

Ans.—Talcott street, St. Louis, Mo.

PREPARATION FOR POLISHING BRASS.

From L. D. McQuiston & Co., Monticello, Ark.

Where can we get a preparation for cleaning and polishing brass such as automobile lamps, horns, etc.?

Ans.—A-B Polish Co., 14 Haddon avenue, Chicago; Nickel Plate Stove Polish Co., 461 Illinois street, Chicago; Black Silk Stove Polish Works, Sterling, Ill.

WELDING A BROKEN TROWEL BLADE.

From John C. I. MacGrath, 232 S. Hoyne Avenue, Chicago.

Where can I get a broken trowel blade (sheet steel) welded?

Ans.—J. E. Plunket, 47 Jefferson street, Chicago.

BRONZE RAISED-LETTER NAME PLATES.

From The J. L. Roark Estate, Greenville, Ky.

Where can we get bronze raised-letter name plates made?

Ans.—Troy Nickel Works, Albany, N. Y.; Tuttle & Bailey, 83 Beekman street, New York; Dow Wire Works, Louisville, Ky.; Winslow Bros. Co., 46th and Harrison street, Chicago.

SASH WEIGHTS, HITCHING WEIGHTS, AND POST MAULS.

From C. A. Peck Hardware Co., Berlin, Wis.

From what foundry can we purchase sash weights, hitching weights and post mauls?

Ans.—King & Andrews, Chicago Heights, Ill.; Hanney Mfg. Co., 169 Dearborn St., Chicago; A. O. Murphy, Taylorville, Ill.

FLAMBEAU BLOW TORCHES.

From Schleer Bros. Hardware Co., Jefferson City, Mo.

Where can we get flambeau blow torches?

Ans.—Pain Fire Works Co., Chicago.

PISTON WATER MOTORS.

From the Wiard Mfg. Co., East Avon, N. Y.

Who makes piston water motors for running washing machines?

Ans.—Blackstone Mfg. Co., Jamestown, N. Y.; Princess Mfg. Co., Cincinnati, O.; R. Irwin Mfg. Co., Cincinnati, O.

ITEMS.

The Decatur Cornice & Roofing Co. of New Decatur, Ala., contemplates the erection of a three-story building 135x135 feet, which will give them more than double their present floor space.

The tin plate mills of the Lalance & Grosjean Mfg. Co. at Harrisburg, Pa., will resume operations on September 8 after a shut-down of several weeks.

The American Iron Roofing Co. of Elyria, O., has been incorporated with a capital stock of $25,000 by C. H. Lewis, Louis Schmerer, Frank R. Fauver, Charles L. Schmerer and Julia Schmerer.

Cortright metal shingles, manufactured by the Cortright Metal Roofing Co., Philadelphia, Pa., have been used on the Hickman Memorial Hall at Graniteville, Ga. The building is three stories high and was erected at a cost of $30,000.

The Baltimore Metal Stamping & Mfg. Co. Baltimore, Md., recently incorporated, will erect a fire-proof building 35x200 feet for the manufacture of metal ceilings, etc. The officers of the company are: President, W. F. Betzel; secretary, J. G. Rupp; treasurer, W. H. Chase.

The regular monthly meeting of the Master Sheet Metal Workers' Association of Milwaukee, Wis., was held at the Builders' and Traders' Exchange rooms, 456 Broadway, Milwaukee, on Sept. 2. The delegates which attended the Chicago convention presented their report to the association.

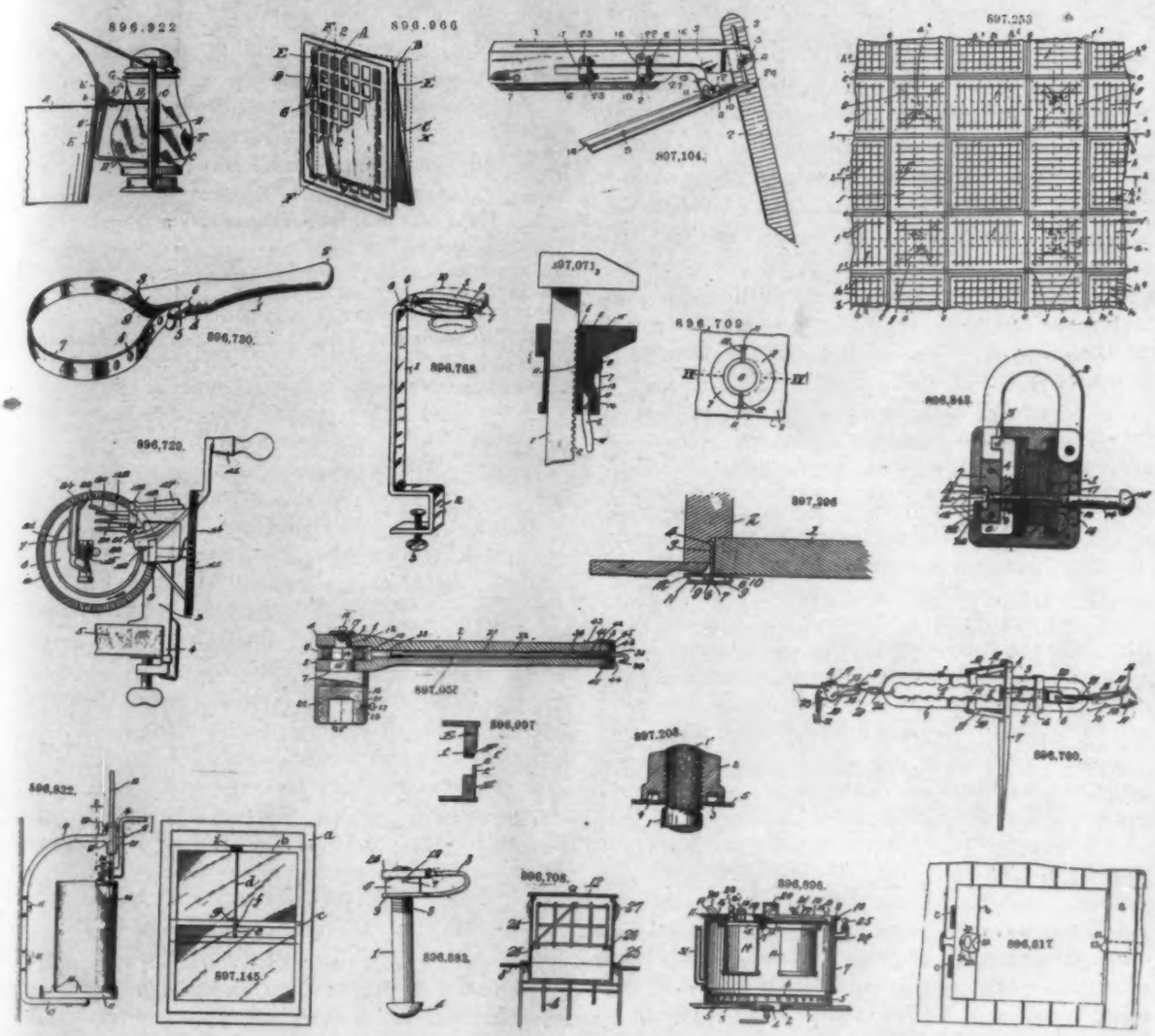
A receiver has been appointed for the H. C. H. Walsh Co. of Chicago, manufacturers of machinery, The appointment of a receiver followed the filing of a petition by creditors to have the concern adjudged bankrupt. The liabilities are said to be between $25,000 and $30,000, and the assets $15,000.

The controlling interests of The Canton Art Metal Co. of Canton, Ohio, are erecting a rolling mill at Massillon, Ohio, which will be put in operation about January, 1909. A six-mill plant will be operated at first which will be enlarged as business demands it. A galvanizing plant where black and galvanized sheets in the different gauges will be manufactured, will be run in connection with the mill.

C. G. Hussey & Co., Pittsburg, Pa., manufacturers of copper in sheets, plates, rolls, etc., have just issued their price-list of oval and flat-head copper tacks, cut copper slating nails, wire slating nails, copper cut nails, copper burrs and copper washers. The firm's oval and flat head copper tacks are packed in one-pound pasteboard boxes labeled, a case consisting of 100 of such boxes. Other products of C. G. Hussey & Co., include copper gaskets and bottoms, soldering irons, tinned and polished copper and special shapes sheared or stamped. When writing C. G. Hussey & Co., kindly mention THE AMERICAN ARTISAN.

Magnalium is the name given to an aluminum alloy which is said to be lighter and stronger than aluminum, and to offer a higher resistance to corrosion. It can be soldered, forged and plated, it is said, with either nickel, gold or silver. Weight for weight magnalium is said to show a greater tensile strength than any known metal. It can be delivered in pigs or ingots for casting or forging purposes, plates, bars, rods, wire or tubing. This metal, although having been used extensively, it is said, in Europe, has not been used to any great extent in the United States.

NEW PATENTS.



896,708—Cooking Utensil. George H. Bruce, Saugus, Mass. Filed Jan. 20, 1908. Serial No. 411,780.

896,709—Bolt-Fastening Device. Andrew V. Bryce, Pittsburg, Pa., assignor to Inter-State Manufacturing Co., Pittsburg, Pa., a corporation of Arizona. Filed Sept. 16, 1907. Serial No. 393,074.

896,729—Apple Parer. David F. Hunt, Sodus, N. Y. Filed Jan. 20, 1908. Serial No. 411,608.

896,730—Pipe Wrench. Florent Ioset, Wadena, Minn. Filed Feb. 28, 1908. Serial No. 418,322.

896,760—Wire Stretcher. Constant M. Ruggles and Harry A. Ruggles, Glenellyn, Ill. Filed Dec. 16, 1907. Serial No. 406,705.

896,768—Holder for Inverted Sad-Irons. Josephine Shelton, New York, N. Y. Filed Oct. 13, 1906. Serial No. 338,838.

896,817—Door-Catch. Peter Forg, Somerville, Mass. Filed Nov. 14, 1907. Serial No. 402,096.

896,822—Can-Opener. Frederick P. Gorin, Chicago, Ill. Filed Nov. 4, 1907. Serial No. 400,574.

896,843—Padlock. Samuel H. Manning, Wilton, Ky. Filed April 16, 1908. Serial No. 427,410.

896,883—Nut-Lock. James J. Bailey, Houston, Tex. Filed Nov. 19, 1907. Serial No. 402,891.

896,898—Cooking Utensil. Laura E. Daniels, Fort Worth, Tex. Filed Oct. 30, 1907. Serial No. 399,885.

896,922—Lantern Holder. Charles A. Knapp, Sheridan, Mich. Filed Aug. 15, 1907. Serial No. 388,726.

896,966—Register or Ventilator. James H. Bailey, New York, N. Y., assignor to Tuttle & Bailey Manufacturing Co., a corporation of New York. Filed Nov. 22, 1907. Serial No. 403,308.

896,997—Firearm. Allan E. Lard, St. Joseph, Mo. Filed Jan. 15, 1902. Serial No. 89,814.

897,055—Wrench. Robert F. Bowers, Fordyce, Ark. Filed Nov. 29, 1907. Serial No. 404,281.

897,071—Wrench. Gebhard Ebenhoch, Belle Vernon, Pa. Filed Feb. 7, 1908. Serial No. 414,787.

897,104—Carpenter's Bevel Square. Carl M. Hoeregott, Hume, Ill. Filed March 17, 1908. Serial No. 421,645.

897,145—Sash Lock. Gilbert S. Prior, Hyde Park, Mass. Filed March 18, 1908. Serial No. 421,804.

897,206—Door Securer. Elihue M. Hembree, Roswell, Ga., assignor of one-half to James M. Pursley, Marietta, Ga. Filed Feb. 26, 1908. Serial No. 417,858.

897,208—Lock-Nut. Johannes L. Kalmbacher, Chicago, Ill. Filed Aug. 9, 1907. Serial No. 387,757.

897,253—Floor and Ceiling Construction for Fireproof Buildings. Leibu Hermann, New York, N. Y. Original application filed Feb. 4, 1907. Serial No. 355,530. Divided and this application filed June 5, 1907. Serial No. 377,289.

Trade Report.

HARDWARE.

There has been a better tone to the hardware market during the past week, coincident with the winding up of the vacation period, and the end of the summer dullness. Reports from various sections of the country indicate active preparations for a good fall business. In nearly all the cases both jobbers and retailers have allowed stocks of staple lines to go far below the danger point, which means that there will be some good buying for replacement. There has been a check in the lines that have been weak during the past month, and both manufacturers and jobbers were firmer in their views, with concessions more difficult to obtain. Trade in the western markets, especially in the agricultural centers, is holding up well, while in the eastern territory business is picking up.

The demand for wire nails continues on the increase. Not only is there a good call for spot goods, but some good-sized contracts are being placed. The bulk of the orders coming forward, however, are from the West. The mills are in receipt of heavy specifications on old contracts. In the local market a spasmodic demand is reported for small individual lots for immediate delivery. Prices are well maintained, although unchanged. Cut nails continue to show a marked improvement. Mills are in receipt of larger orders, owing to the stocking up on the part of jobbers. These stocks have been allowed to run down to a low ebb, and a continued good business may be expected for some months. The output of the mills is still somewhat curtailed, and will only be increased as the demand warrants. Owing to the excellent crop conditions, a heavy demand for barb wire is noted from the West, mills being in receipt of a good volume of new business, together with specifications on old contracts.

The base price of wire nails at the mills is $1.95 per keg. The jobbing price is $2 at the mill for full carloads, $2.10 at the mill for less than carloads and $2.40 out of store. The base price of cut nails at the mill is $1.80 per keg. The jobbing price is $1.85 for full carloads at the mill, $1.95 for less than carloads at the mill and $2.25 out of store.

In the Chicago market wire nails are quoted at $2.13; painted barb wire, $2.28; galvanized barb wire, $2.58; smooth annealed wire, $1.98; smooth galvanized wire, $2.28; galvanized staples, $2.53; polished staples, $2.23. Quotations to retailers in car lots are 5 cents higher and in less than car lots 15 cents higher.

TIN PLATE.

Many of the hot mills which suspended operations recently because they were ahead of the finishing department have started up again and are making a nominal output. The American Sheet & Tin Plate Co. is operating at about 50 per cent of its capacity. Galvanized plates are in good request, but black plates are still slow. Prices are $3.89 for 100-pound coke-plates f. o. b. New York and $3.70 at Pittsburg mills, with the Independents quoting $3.65.

Am. coke tins, I. C., from store, New York:	
Bessemer steel, 107 lbs., 14x20	$4.35@4.40
Bessemer steel, 100 lbs., 14x20	4.20@4.25
Bessemer steel, 95 lbs, 14x20	4.10@4.15
Bessemer steel, 90 lbs., 14x20	4.00@4.05
Am. charcoal terne, 8-lb. coating—	
Worcester grades, 14x20, 107 lbs	4.30@4.35
Worcester grades, 14x20, 100 lbs	4.15@4.20
Worcester grades, 20x28, 200 lbs	8.05@8.10
For prompt shipment, f.o.b. mill—	
Coke, tins, 14x20, I. C	3.85@3.90
Coke, tins, 14x20, 100 lbs	3.70@3.75
Coke, tins, 14x20, 95 lbs	3.65@3.70
Coke, tins, 14x20, 90 lbs	3.60@3.65
Charcoal, terne, 20x28, I. C	7.30@7.35
Charcoal, terne, 20x28, 200 lbs	7.00@7.05

Usual difference for odd sizes and weights.

SHEETS.

The sheet market exhibits a little more activity, mills reporting specifications coming in somewhat more freely, though business is by no means heavy. Some of the independent mills are said to be making concessions of from $1 to $3 per ton.

The following are New York prices for 500-bundle lots and over, f. o. b. mill:

	Galvanized Net.
No. 30	4.05
No. 29	3.80
No. 28	3.65
No. 27	3.35
Nos. 25 to 26	3.15
Nos. 22 to 24	2.95

COPPER.

There is a very firm market for ingot copper, though trade has been rather quiet during the past week. The market continues to be completely under the control of the speculative element, though the larger producers have not been carried off their feet by the excitement, and are holding their product very firmly. The best brands of Lake copper are quoted at 14 cents, and as they are sold ahead producers are not showing any anxiety over the situation. Recovery in the trades using copper largely is very slow, and it will doubtless be some time before the market resumes its normal tone. At the same time, there is undoubtedly much interest being taken in the situation by consumers, although they are not yet ready to operate very heavily. It is reported that some of the leading producers are receiving bids of 14 cents for Lake and 13⅞ cents for electrolytic. It is said to be impossible to get any electrolytic from second hands at less than 13¾ cents. There has been more or less fluctuation in the London copper market during the week, though generally within a narrow range. There is a very firm market for sheet copper, the base price being unchanged at 18 cents. There has been no change in yellow metal, quotations being 17 cents for dimensions, 15 cents for sheathing and sheathing nails, 16 cents for slating nails, and 17 cents for keel and stem metal.

Extreme fluctuations for this year:

	Highest.	Lowest.
Electrolytic copper, spot	13⅞	12¼
Lake copper, spot	14	12⅝
Casting copper, spot	13⅝	12⅛

SPELTER.

Spelter is firmer and higher, with producers out of the market temporarily. New York quotes 4.75@4.80 for spot and September, and St. Louis is firm and higher at 4.57½, with sales of 200 tons at that figure. The Boston jobbing price is 5@5⅛ cents.

Extreme fluctuations for the year:

	Highest.	Lowest.
Spot, New York	$4.80	$4.30
Spot, London	£22 0 0	£18 0 0

SHEET ZINC.

Business in sheet zinc continues of small proportions. Consumers are taking nothing beyond actual requirements for immediate use, and trading is mainly routine in character. Prices are steady on the basis of $7 per 100 pounds f. o. b. smelter, with 8 per cent discount. There is no charge for extras. Prices on cask lots are held at $7.05@7.15 per 100 pounds.

PIG IRON.

In the Alabama district there is a very firm market for foundry pig iron, with the minimum quotation firm at $12.50, and some makers refusing to sell at less than $13. What effect the calling off of the coal strike will have on the iron market remains to be seen. The effect hitherto has been seen in curtailment and increased cost of production, and it would not be strange if the settlement of the trouble should bring about an easier feeling. Thus far nothing of the kind has been developed, and there appears to be relatively more strength at Birmingham than with the northern furnaces. Trade in New England is very quiet, the large buyers having had their most pressing needs supplied for the present. The demand is for deliveries running through the balance of the year, as thus far there has been very little done in iron to be delivered in 1909. The furnaces are holding back on sales for forward delivery, as they do not care to contract with any degree of freedom for delivery after the first of the year on anything like the present quotations. Many of the furnaces, especially in the South, are well supplied with business, and there does not seem to be any uneasiness over the situation, even though the market is temporarily showing a quiet tone. The Buffalo district has been selling iron quite freely in New England lately. Stocks are very small at the furnaces, North and South, and have been greatly reduced during the past month. Alabama iron is very firm at $12.50@13 f. o. b. Birmingham, with a number of sales at full prices. No further change is noted in Virginia iron, the market being firm. Pennsylvania iron is steady at $17.75@18, New England delivery.

CHICAGO MARKET.

Lake Superior charcoal	$19.50@20.00
Northern foundry No. 1	17.50@18.00
Northern foundry No. 2	17.00@17.50
Northern foundry No. 3	16.50@17.00
Southern foundry No. 1	17.35@17.85
Southern foundry No. 2	16.85@17.35
Southern foundry No. 3	16.35@16.85
Southern foundry No. 4	15.85@16.35
Southern No. 1 soft	17.35@17.85
Southern No. 2 soft	16.85@17.35
Southern gray forge	15.60@16.10
Southern mottled	15.35@15.60

PITTSBURG MARKET.

No. 1 foundry	15.90@16.15
No. 2 foundry	15.40@15.65
Gray forge	14.65@14.90
Bessemer	16.15@16.40
Basic	15.65@15.90

BIRMINGHAM MARKET.

No. 1 foundry	12.50@12.75
No. 1 soft	12.50@12.75
No. 2 foundry	12.00@12.25
No. 2 soft	12.00@12.25
Gray forge	10.50@11.00

Matthew & Co., Cincinnati, will say in their weekly report: "The developments of the week have all been on the right side. Buying has been scattered and of really good volume. Probably the most satisfactory thing about the buying is the fact that it is scattered and that all kinds of iron are bought in all sections of the country. This shows the fact that general conditions are in better shape. In fact the whole history of the iron trade at the present time is that of a convalescent market. The market has been very sick indeed, but for six months now a steady improvement has been noted. It has been slow, but it has been sure.

"There is no boom in the trade at the present time and there is no boom in sight, but that things will keep on gradually growing better and better seems certain. Consumers of iron are having more places to put their product and they are using more and more iron. It is highly encouraging, too, to note that the iron trade is at the present time in such a fair situation, remembering that the railroads have been buying nothing and that this very large element of prosperity in the iron trade has been lacking. Just now the railroads seem about to wake up again. Certain it is that they cannot keep on indefinitely without letting their equipment get in such condition that there will be trouble in moving the crops.

"In the south there is a general feeling of relief because the strike of the coal miners has been called off. This strike has been an exceedingly expensive and annoying affair, and now that it is over all of the Birmingham operators have a load lifted from their minds."

Roger, Brown & Co., Cincinnati, will say in their weekly report: "The month just closed was an excellent indication of improved conditions and better outlook. Sales are of fair tonnage, prices are firm with, in some cases, an advance over two weeks ago and buyers seem to be melting an increased tonnage.

"There is some irregularity in Northern prices, but in the South there is more harmony and prices are stronger. There have been some good sales made of Northern and Southern iron recently, which have tended to improve the situation.

"There has been better buying by the railroads, both as to rails and equipment. Furnaces are reluctant to quote for business after January 1, and when doing so prices are invariably higher and it is hard to get together with buyers' ideas for next year at the present time. There has been free inquiry for 1909 and considerable iron had been bought. In most instances buyers seem to have had a decided advantage in these transactions.

"Consumption is increasing, and while production has been somewhat greater it has been retarded in the South by the coal miners' strike and the difficulty of getting fuel from other points.

"It has been estimated that during August an aggregate of finished steel products amounting to 50,000 tons was placed by buyers. Very little of this, however, was for railroad work. It is of interest to note that present estimates show the rail production during the year will probably be less than two million tons, or somewhat less than half of the tonnage rolled and disposed of in 1907.

"Coke is active and contracting in furnace fuel has been good. The output in all districts is increasing."

Current Hardware and Metal Prices.

THE AMERICAN ARTISAN AND HARDWARE RECORD is the only publication containing western hardware and metal prices corrected weekly.

METALS.

FIRST QUALITY BRIGHT PLATES.

		Per Box.
IC	14x20	$6 40
IX	14x20	7 45
IXX	14x20	8 60
IXXX	14x20	9 85
IXXXX	14x20	11 00
IC	20x28	13 70
IX	20x28	15 70
IXX	20x28	18 15
IXXX	20x28	20 55
IXXXX	20x28	22 95

COKE PLATES.

Cokes, 180 lbs	IC	20x28	$ 8 5
Cokes, 200 lbs	IC	20x28	9 00
Cokes, 216 lbs	IC	20x28	9 50
Cokes, 270 lbs	IX	20x28	11 25

PIG IRON.

North'n Fdy., No. 1	$17 50@$18 00
North'n Fdy., No. 2	17 00@ 17 50
North'n Fdy., No. 3	16 50@ 17 00
Southern Fdy., No. 1	17 35@ 17 85
Southern Fdy, No. 2	16 85@ 17 35
Southern Fdy., No. 3	16 35@ 16 85
Southern Fdy., No. 4	15 85@ 16 35
Southern No. 1 Soft	17 35@ 17 85
Southern No. 2 Soft	16 85@ 17 35
Southern Gray Forge	15 60@ 16 10
Southern Mottled	15 35@ 15 60
Lake Sup. Charcoal	19 50@ 20 00
Southern Silveries, 4% Silicon	18 85@ 19 35
Southern Silveries, 5% Silicon	19 35@ 19 85
Southern Silveries, 6% Silicon	19 85@ 20 35
Jackson Co. Silveries, 6 per cent	19 90@ 20 40
Jackson Co. Silveries, 8 per cent	20 90@ 21 40
Jackson Co. Silveries, 10 per cent	21 90@ 22 40
Malleable Bessemer	17 25@ 17 75
Standard Bessemer	18 25@ 18 75
Alabama Basic	16 85@ 17 35

BLACK STEEL SHEETS.

No. 12	per 100 lbs.	$2 20@$2 30
No. 14	per 100 lbs.	2 25@ 2 35
No. 16	per 100 lbs.	2 35@ 2 45
Nos. 18-20	per 100 lbs.	2 60@ 2 65
Nos. 22-24	per 100 lbs.	2 65@ 2 70
No. 26	per 100 lbs.	2 70@ 2 75
No 27	per 100 lbs.	2 75@ 2 80
No 28	per 100 lbs.	2 85@ 2 95

GALVANIZED

No. 10	per 100 lbs.	$3 05@$3 10
Nos. 12-14	per 100 lbs.	3 05@ 3 10
No. 16	per 100 lbs.	3 05@ 3 10
Nos. 18-20	per 100 lbs.	3 15@ 3 25
Nos. 22-24	per 100 lbs.	3 30@ 3 35
No. 26	per 100 lbs.	3 50@ 3 55
No. 27	per 100 lbs.	3 70@ 3 75
No. 28	per 100 lbs.	3 90@ 4 00

POLISHED SHEET STEEL.

No. 24	per 100 lbs	$4 90
No. 26	per 100 lbs.	5 00
No. 27	per 100 lbs.	5 10
No. 28	per 100 lbs.	5 20

SMOOTH STEEL.

Wood's Smooth,	No. 20	$3 05
" "	No. 22-24	3 10
" "	No. 25-26	3 15
" "	No. 27	3 20
" "	No. 28	3 30

PATENT PLANISHED SHEET IRON.

Patent Planished Sheet Iron, "A" $10.20, "B" $9 20

PATENT PLANISHED SHEET STEEL.

Dickey Planished Sheet Steel 8½c

SOLDER.

XXX Guaranteed ½ & ½	per lb. 18 c
Commercial ½ & ½	per lb. 17½c
No. 1 Plumbers	15½c

SHEET ZINC.

500 lb. Casks	case, per cwt. $7 15
300 lb. Casks	per cwt. 7 15
Sheets	per cwt. 7 15

COPPER.

Copper sheet, 100 lbs. over, base 17c

TIN PIGS AND BARS.

Banca, pigs, per lb	29 c
Straights, pigs, per lb	29 c
Straights in bars, per lb	33 c

LEAD.

American Pig	4 c
Bar	4 c
National (White) brands (in less than 100 lb lots), per lb	8½c
Sheet.	
Full coils	per 100 lbs. $9 00
Cut coils	per 100 lbs. 9 50

HARDWARE.

ADZES.

Carpenters'.	
Plumbs	40%
Coopers'.	
Barton's	20%
White's	**15%**
Railroad	
Plumbs	40%
Ship.	
Plumbs	40%
White's	12½%

AMMUNITION.

Caps, Percussion—per 1,000.

F. L Waterproof, 1-10s	40c
G D	35c
Musket	60c

Shells, Loaded—

Loaded with Black Powder	40%
Loaded with Smokeless Powder, medium grade	40 & 5%
Loaded with Smokeless Powder, high grade	40 & 10 & 10%

Union Metallic Cartridge Co.:

New Club, Black Powders	40%
Nitro Club, Smokeless Powders,	40 & 5%
Arrow, Smokeless Powders	40 & 10 & 10%

Winchester:

Smokeless Repeater Grade	40 & 5%
Smokeless Leader Grade	40&10&10%
Black Powder	40%

Gun Wads—per 1,000.

Winchester Gun Wads	15%

Powder.

		Each.
DuPont's Sporting,	kegs	$ 50
" "	½ kegs	2 50
" "	¼ kegs	1 40
Dupont's Sm'k'less,	50-lb. drum	22 45
" "	25-lb. kegs	11 30
" "	12½-lb. kegs	5 80
" "	6½-lb. kegs	2 97
"	1-lb. cans	15

Shot.

Drop shot, sizes smaller than B, 25-lb. bags, per bag	1 95
Drop shot, B and larger sizes, 25-lb. bags, per bag	2 20
Buck Shot, 25-lb. bags, per bag	2 20
Chilled Shot, 25-lb. bags, "	2 25

ANCHORS

Expansion Screw Anchors 10%

ANVILS

Trenton, 70 to 80 lbs	9½c per lb
Trenton, 81 to 150 lbs	9½c per lb

ASBESTOS.

Board and Paper 33⅓%

AUGURS.

Boring Machine	70%
Irwin's	40&10%
Carpenter's Nut	70%
Hollow.	
Bonney's—list $30.00	75&5%
Stearns, No. 3	36 00
Post Hole.	
Digwell, 8-inch	per doz. 12 50
Iwan's Post Hole and Well	40%
Vaughan's, 4 to 9-in., per doz.	6 25
Rafting.	
Snell's	50&5%
Ship.	
Ford's, with or wi'out screw	40-12½%
Snell's " " "	40-5%

AWLS.

Brad.		
No. 3 Handled	per doz.	$0 40
No. 1050 Handled	"	80
Shouldered, assorted, 1 to 4,	per gro.	$1 20
Patent asst'd, 1 to 4	"	85
Harness.		
Common	"	95
Patent	"	90
Peg.		
Shouldered	"	1 20
Patent	"	60
Scratch.		
No 1 handled	"	4 80
No. 15, socket handled	per doz.	1 25
No. 7 Stanley		1 80
Sewing.		
Common	per gro.	90
Patent	"	90

AXES.

Boy's Handled.		
Lippincott, 3 lb	per doz.	$6 00
Falls City	"	6 00
Broad.		
Plumbs, West, Pat		23⅓%
" Can. Pat		40%
" Firemen's (handled)	per doz	$1, 75
Plumbs, Miners' (handled)	"	6 75
Single Bitted (handled)		
Gladiator . 3 to 4 lbs ,	per doz	$11 00
Flint Edge " "	"	9 25
Standard .. " "	"	9 25
Elec Chopper, Forest Clipper		10 50
Perfect Premier " "		10 00
Crown " "		7 00
Single Bitted (without handles)		
Gladiator...3 to 4 lbs.	per doz.	$8 50
Flint Edge. "	"	7 00
Standard... "	"	7 00
Electric Chopper"	"	9 25
Perfect..... "	"	7 75
Crown..... "	"	9 25
Double Bitted (without handles).		
Gladiator... 3 to 4 lbs.	per doz.	11 50
Flint Edge. "	"	9 75
Perfect..... "	"	11 00

The above prices on axes of 3 to 4 lbs. are the base prices.

3½ to 4½ lbs advance 25c
4 to 4½ lbs. advance 50c.
4½ to 5½ lbs. advance 75c.

BAGS, PAPER NAIL.

Pounds	10	16	20	25
Per 1,000	$2.50	3.75	4.50	5.00

BALANCES, SPRING.

Frary's	40%
Pelouze	20%

BARS. CROW.

Pinch or Wedge Point..per cwt. $3 75

BASKETS.

Clothes.			
Small Willow	per doz.	$7 00	
Medium "	"	8 75	
Large "	"	10 50	
Galvanized Iron.	½ bu.	1 bu.	1½ bu.
Per doz	$4 75	6 50	8 00

BEATERS.

Carpet.		per doz.
No. 10 Coppered Spring Wire		$0 90
No. 12 Spring Wire		1 10
No. 10 Preston		1 10
Egg.		Per doz.
No. 50 Imp. Dover		$0 75
No. 102 " "	tinned	85
No. 150 " "	hotel	1 40
No. 10 Heavy hotel tinned		2 10
No. 13 " " "		3 30
No. 15 " " "		3 60
No. 18 " " "		4 50

BELLOWS.

Blacksmiths'	65%
Hand.	
8-inch	per doz. $8 50
10-inch	" 10 50
Moulders'.	
12-inch	" 12 50

BELLS.

Call.	
3-inch Nickeled Rotary Bell, Bronzed base	per doz. $5 00
Cow.	
High Grade	60%
Kentucky	65&10%
Door.	Per doz.
New Departure Automatic	$6 00
Rotary.	
3 -in. Old Copper Bell	4 00
3 -in. Old Copper Bell, fancy	6 00
3 -in. Nickeled Steel Bell	4 50
3½-in. Nickeled Steel Bell	5 00
Hand.	
Hand Bells, polished	50&5%
White Metal	40%
Nickel Plated	30%
Swiss	40&33⅓%
Silver Chime	33⅓%
Miscellaneous.	
Church and School, steel alloy	50%
Farm, lbs 40 50 75 100	
Each $1.25 1.00 2.35 2.85	

BEVELS, TEE

Stanley's, rosewood handle, new list	25%
Stanley's iron handle	25%

BINDING, OILCLOTH.

Zinc	80%
Brass	70&10%
Brass plated	75&5%

BITS.

Auger.	
Extra Double Spur	70&10%
Ford's Car and Machine	40&10%
Triumph	50&5%
Ford's Ship	40&10%
Irwin	50%
Russell Jenning's	25&10%
Clark's Expansive	60%
Steer's " Small list, $22.00	25%
" " Large " $26.00	25%
Irwin Car	45%
Ford's Ship Auger pattern Car	40&10%
Center	40&10%
Countersink.	
No. 18 Wheeler's per doz.	$1 25
No. 20 " "	1 75
American Snail head	75
" Rose "	90
" Flat	75
Mayhew's Flat	1 25
" Snail	1 25
Dowell	
New Jennings	40&10%
Gimlet.	
Standard Double Cut	60%
German Pattern per doz.	$0 60
German "	65
Gouge "	80
Spoon "	80
Countersink "	1 00
Reamer.	
Jenning's Square "	2 50
Standard Square "	75
German Octagon "	75
Screw Driver.	
No. 7 Common "	50
No. 1 Triumph "	1 25
No. 2 " "	1 —
No. 340 Shepardson's "	—
No. 1 Smith's "	— —

BLACKING, STOVE. (See Polish).

BLADES, SAW.

Butchers'.
Standard, ¾ & 1½-in.....40%
Clock Spring.....40%
Star.....15%
Coil.....each, $1 50
Hack.
Disston's.....25&5%
Flexible.....33⅓&5%
Star.....20&5%
Wood.
Jackson's.....per doz. $2 25
Disston's—No. 6, 16, 26 & 045.. 4 25
Triumph..... 3 50
Forest Clipper..... 3 00

BLOCKS.

Snatch.
Wooden.....60&10%
Steel.....50%
Tackle.
Iron Strapped.....70%
Com. Steel.....60%

BOARDS. (New List)

Stove.....50&10%
Wash.
Globe, single.....per doz. $2 50
Globe, double..... " 3 35
Peace Maker..... " 3 00
Crystal Glass..... " 4 00
Brass King..... " 4 00
Nickel Plate..... " 4 15

BOBS, PLUMB.

Carpenters'.
No. 2, iron.....per doz. $0 65
No. 00, " ..... " 1 30
No. 0, " ..... " 1 80
No. 3, lead..... " 2 90
No. 4, " ..... " 3 40
No. 113, brass plated.. " 1 10
No. N30, nickel plat'd. " 1 30
No. N31, " " " 1 85

BOLTS.

Carriage, Machine, etc.
Carriage, ¾x6 and sizes smaller and shorter.....70&10%
Carriage, sizes larger and longer than ¾x6.....60&5%
Machine, ¾x4 add sizes smaller and shorter.....70&10%
Machine, sizes larger and longer than ¾x¾x4.....60&5%
Elevator.....50-10&5%
Plow.....60&10%
Stove .....80&10%
Tire.....75%
Wagon Box Strap.....70%
Mortis, Door.
Gem, iron.....60%
Gem, bronze plated.....20%
Barrel.
Cast.....60%
Wrought.....
Wrought, bronzed.....50%
Flush.
Wrought.....50&10%
Spring.
Wrought.....
Wrought, heavy.....
Square.
Cast.....50&10%
Wrought.....

BORERS.

Angular.
Miller's Falls.....per doz. $13 00
Bung.
Doz.
Enterprise Mfg. Co.'s No 1... $14 00
" " " No 2. .. 18 50

BOXES

Mail, No..... 1 2 10
Per doz.....$3.50 5.00 17.50
Miter.
New Langdon.....15&5%
Stanley's.....30%
Seavey's.....each, $1 50

BRACES.

Barber's ..... 50&10&10@50&10&15%
Fray's Genuine Spofford's.....60%
" Nos. 66 to 146.....50%
" No. 0108..... $3 50
" No. 06..... 2 75
" No. 010..... 2 85

BRACKETS.

Hay-Rack.
Wenzelmann's No. 1, per doz. $9 00
" No. 2, " 9 60
Shelf.
Cast Iron, bronzed.....50-10&5%
Clover Wrought Steel.....70&10%
Clover Folding.....70%

BROILERS.

Wire.....70%
No. Cwron, Self-basting, 80doz .. $2 80

BUCKETS.

Pump, Rubber.
Wychoff.....per gro. $4 75
Cooper..... " 4 75
Champion..... " 7 50
Victor..... " 9 25
Star..... " 5 00
IXL..... " 6 75
Well.
Galv'd Qts..... 10 12 14
Per doz.....$2.90 $3.25 $3.40
Wooden, top ear, plain, per doz. 4 00
" " swivel, " 5 10

BUCKS, SAW.

Folding.....per doz. $2 10

BURRS, RIVETING.

Copper Burrs only.....30%
Tinners' Iron Burrs only.....65&5%

BUTTS.

Cast Iron.....70&5%.
Wrought Brass (New List).....40%
Wrought Steel, Bright.
Wrought Steel, Japanned.
Nos. 731 and - .....70&10%

CALIPERS.

Double.....65&5%
Inside and Outside.....65&5%
Wing.....70%

CALKS.

Logger's Boot.
(Luflkin R. Co.'s), per M..... $3 75
Toe.
Shoenberger.....per lb 5 c
Bessemer..... " 4½c
American..... " 7 c
Swedes..... " 8½c

CANS.

Cheese Factory.
Ontario Pattern.
Gallons..... 20 30 40
Each..... $4.25 $5.00 $6.25
Milk.
Holstein.
Nos..... 300 301 302
Gals..... 5 8 10
Per doz.....$26.00 $27.00 $29.00
Chicago Pattern.
Nos..... 105 108 110
Per doz.....$19.00 $21.50 $23.00
Iowa Pattern.
Nos..... 408 410
Per doz..... $23.50 $24.50
New Elgin Pattern.
Nos 705 708 710
Per doz.....$25.00 $27.00 $28.00
Burn Pattern
Nos..... 700 701
Gals..... 8 10
Price..... $2.40 $2.65

CAN OPENERS.

See Openers.

CAPS, GUN.

See Ammunition.

CARPET STRETCHERS.

See Stretchers.

CARRIERS.

Hay.
Diamond, Regular.....each, $3 85
Diamond, Sling..... " 6 50
Myers' Imperial ..... " 3 85
Myers' Clover Leaf..... " 4 00

CARTRIDGES.

See Ammunition.

CASTERS.

Standard—Ball Bearing.....50&10%
Bed.....60&5%
Common Plate.
Brass Wheel.....60&10%
Iron and porcelain wheels, new list.....60&5%
Philadelphia Plate, new list.....70%
Martin's.....60%
Payson's.....75&10%

CATCHERS, GRASS.

Carroll's, No. C.....per doz. $4 25
Wildermuth's,.
Nos..... 1 2 3
Per doz.....$5.60 $5.75 $6.25
Nos..... 4 5 6
Per doz.....$6.75 $9.50 $10.00

CHAIN AND CHAINS.

Breast Chains.
Doubleslack.....doz. pairs, $5 75
With Covert Snaps. " 5 00
With Slide..... " 3 25
Without Slide..... " 2 85
Bright Ox Chains.
¾-in. $7.25; ⅝-in. $5.45 per 100 lbs.

Cable Coil Chain.
Inch..... 5/16 ⅜ 7/16 ½
Per 100 lbs.$10.80 $8.00 $7.00 $6.20
Inch..... 7/16 ½ ⅝ ¾
Per 100 lbs.$6.00 $5.00 $5.75 $5.65
Inch..... ¾ 1 1¼
Per 100 lbs.....$5.55 $5.55 $5.65
Cable Log Chain.
Advance 25c per 100 lb. on Cable Coil.
Cow Tie Chains.
American, 2 toggle.....50&5%
" toggle and snap...50&5%
" open and closed ring.....50&5%
Halter Chains.
American, new list.....33⅓%
German.....60%
Niagara, new list 40%
Brown's, " 40%
Picture Chains.
Light Brass, 3 ft.....per doz. $0 65
Heavy Brass, 3 ft .... " 1 00
Pump Chain
Galvanized, per 100 lbs.....$5 50
Safety Chain.
Brass.....60%
Special Steel Loading Chain.
Inch..... ½ 9/16 5/16
Per 100 lbs.....$16.00 $13.50 $12.50
Stretcher Chains.
5/16-in. $8.50; ⅜-in. $7.75 per 100 lbs.
Tie-Out Chains.
Brown's.....70&5%
Trace Chains.
Western Standard.
6½— 6-2.....per pair 30c
6½— 8-2..... " 34c
6½— 8-3..... " 33c
6½—10-2..... " 38c
7 — 8-2..... " 38c
7 —10-2..... " 42c
7 —10-1..... " 48c
7 —10-0..... " 60c
Add 2c per pair for Hooks.
Add 2c " for Twist Link.
Wagon Stay Chains.
Inch..... ½ 9/16 ⅝
Per 100 lbs.....$6.50 $6.00 $5.50

CHALK, CARPENTERS'.

Blue.....per gro. 75c
Red..... " 65c
White..... " 55c
Common White School Crayon..... " 8c

CHARCOAL.

In bags..... per bag 90c

CHECKS, DOOR.

Blount.....33⅓%
Sargent's.....33⅓%

CHIMNEY TOPS.

Iwan's Volcano.....50%

CHISELS.

Box.
Inches..... 10 12 14
Round per doz....$2.10 $2.25 $2.75
Flat " ... 2.85 3.60 4.20
Cold.
Good quality, ¾ in. and larger.....per lb. .12c
Smaller size per doz.....
Socket, Framing and Firmer.
Clover.....75&10%
Tanged, Firmer.
With handles..... 30&5%
Choppers, See *Cutters, Meat.*

CHUCKS, DRILL.

Goodell's, for Goodell's Screw Drivers.....per doz. $6 25
Yankee, for Yankee Screw Drivers..... 5 00

CHURNS.

Anti-Bent Wood,
Gal..... 5 7 10
Each.....$3.90 $4.60 $4.85
Belle, Barrel.....65&7½%
Common Dash, Gal. 4 5 6
Per doz..... $7.75 $8.50 $10.50
Union, Gal..... 5 7 10
Each.....$3.05 $3.90 $4.75

CLAMPS.

Adjustable.
Martin's.....30%
Carpenters'.
Steel Bar.....25%
Hose.
Sherman's, brass, ¾-in., per doz.. 42c
Double, brass, ¾-in., " 90c
Saw Filers.
Disston's list, $30.00.....30%
Stearns', No. 0, $3.50; No. 1, $11.50; No. 3, $5.00 doz.
Wentworth's, No. 1, $6.00; No. 3 $7.50.

CLAWS, TACK.

Cast, wood hdle..... per doz.45@60c
Forged steel, wood hdle " $0.80
Solid steel..... " 1 00
Giant..... " 50

CLEANERS.

Drain.
Iwan's Adjustable.....55%
Iwan's Stationary.....40&5%
Pot.
Wire.....per doz. $0 55
Side-Walk.
Steel.....per doz. $3 25
XLCR .....65&5%

CLEAVERS

Family.
Griffin, Inch..... 6 7 8
Per doz.....$5.50 $5.75 $5.25
Royal.....per doz. 2 25
Butchers.
Plumba.....25%

CLEVISES

Malleable .....5½c lb.

CLIPPERS.

Bolt.....$1.90@4.75

CLIPS.

Axle.....65&5%
Damper.
Standard.....per doz. 65c
Troy..... " 38c
Hame..... " 17

CLOTH.

Emery.
Star.....50%
B. & A.....50%
Hardware Wire—full rolls (100 ft.)
2 to 3 incl., Galv.—in full roll... 2 75
4 and 5..... " .. 3 00
6..... " .. 3 25
7 and 8..... " .. 3 75
Screen Wire.
12 mesh, painted, per 100 sq. ft.. 1 35

COCKS AND FAUCETS.

Compression Plain Bibbs...60, 10&5%
Lever Bibb Cocks.....60, 10&5%
Compression Hose Bibbs ..50—10&5%
Telegraph Faucets (new list)..50—5%
Racking Cocks (new list)...60, 10&5%
Compression Lock C'ks(new list).70%
Andrew's Brass Faucets.....70%
Angle Plug Faucets, per doz.....$0 85
Milk Can Faucets, per doz..$2.60-4.20
Petroleum Faucets .....75&5%

COLLARS, STOVE PIPE.

Inches..... 5 6 7
Plain Tin..per gro.$1.90 $2.40 $3.50
Japanned Tin " 3.00 3.00 4.25
Lacquered Brass" 3.00 5.50 4.25

COMBS, CURRY.

Nos... 000 11 15 39 89 108
Per
Doz..$.37 .60 1.90 .90 1.15 .80
Nos... 290 320 390 532 630 1400
Per
Doz.$1.05 .85 1.35 1.20 .75 1.40

COMPASSES.

Carpenters'.....60—10—10%
Pencil—Faber's.....per doz. $1.00

COPPER—See Metals.

COPPERS.

Soldering.
1 lb.....per lb 30c
1½ lb.....31c 2 lb... " 29c
3 lb and larger..... " 26c

CORD.

Picture
White Wire (new list) .....85&10%
Sash.
Monarch Braided Flax ...per lb
Silver Lake. white. 7-32 in. "
Silver Lake, white, 8-32 in. "
Keystone.....8-32 in. " 29c

CORKSCREWS.

Humason & Beckley.....33⅓%
Walker's.....33⅓%
Williamson's Regular.....40&10%
Williamson's Forged Worm.....50%

COTTERS, SPRING.

All sizes—new list.....90&30%

COUPLINGS, HOSE.

Brass.....per doz. $
Brass Plated..... " 85

COVERS, WAGON—See Tents.

CRADLES, GRAIN.

Morgan's Grapevine....per doz.$[illegible]

CRAYONS—See Chalk.

CROW BARS.

Inch or Wedge Point.....per lb 3½c

CUTTERS.

Glass.
Red Devil.....45%
Smith & Hemenway Co.....50%
Woodward.....40%
Meat.
Enterprise, Nos. 5, 10, 12, 22, 32 and 42.....25%
No. 202. list, $1.50 ea.....40&7½%
Pipe.
Stanwoods. No.... 1 2 3
Each.....$0.85 $1.50 $4.00
Slaw and Crout.
3-knife Crout.....per doz. $0 75
1-knife Slaw..... " 1 65
2-knife Slaw..... " 2 25
Washer..... " 7 75

DAMPERS, STOVE PIPE.

Jewel.....50&10%
American..... 50%

DIES AND STOCKS.

Discount.....40%
King's, Little Giant..... 33⅓%

DIGGERS.

Post Hole.
Acme.....per doz. $0 25
Atlas..... " 9 00
Eureka..... " 7 50
Hercules..... " 10 20
Iwan's Split Handle.. " 7 50
Iwan's Perfection.... " 9 00
Iwan's Hercules pattern " 10 00
Ryan's..... " 17 00
See also Augers—Post Hole.
Dividers, Wing.....65&10%

DOOR CHECKS—See Door.

DOORS, SCREEN.

⅞ in. 4-panel, painted...per doz. $7 93
1⅛ in. 4-panel, painted... " 9 50
1⅛ in. 3-panel, natural pine, fancy..... " 12 40

DOOR HANGERS—See Hangers.

DRILLS.

Bit Stock.....60&10%
Blacksmith's Twist.....60%
Breast.
Fray's No. 9.....each, $1 75
Millers Falls No. 12..... " 2 10
Hand.
Goodell's Automatic.
Nos..... 01 03 3 20
Per doz.. $7.75 $12 50 $12.50 $11.00
Goodell's Single Gear. per dos. 15 75
Millers' Falls " " " 12 75
" " Double " " 15 25
Reciprocating.
Goodell's.....per doz. 16 50
Bit Stock.
Standard List.. 60&5%@60%@10

DRIVERS, SCREW.

Standard.....65&10%
Lock Ferrule.....60%
Champion.....40&10%
Champion Patter.....70%
Clark's Interchangeable.....30%
Edison.....60%
Reed's Lightning.....45&5%
Goodell's Spiral.....50, 10, 5&2½%
Yankee Ratchet.....50%
" " Spiral.....50&10%
Smith & Hemenway Co.....40&5%

EAVES TROUGH, GALVANIZED.

Terms, 2% for cash. Factory shipments generally delivered.

See also conductor pipe and elbows.

EGG BEATERS—See Beaters.

ELBOWS.

Adjustable Stove.
Inches..... 5 6 7
Smooth, per doz...$0.75 $0.85 $1.20
Plan'd, " 1.80 2.00 2.65
Corrugated Conductor.
Discount.....75&10%
Corrugated Stove.
Inches..... 5 6 7
Smooth, per doz..$0.85 $1.00 $1.50
Pol'd, " .. 1.40 1.65 2.25
Plan'd, " .. 2.15 2.65 3.40
Four-Piece Stove.
Inches..... 5 6 7
Smooth, per doz..$0.60 $0.65 $0.95
Planished, " .. 1.40 1.70 2.30

EMERY CLOTH—See Cloth.

EMERY TURKISH.

Size .....5-lb. pkgs. ½ kegs. kegs.
No 60 to 150, per lb.. 6c 4c 4c
Flour..... " ... 5c 3c 3c

ENAMEL, IRON.

A-B Iron Enamel, 3 doz. case, ...per gro., 15 00
Peerless..... 1 25

EXTRACTORS, PIG.

See Forceps, Pig

EYES.

Bright Wire Screw—See Goods, B. W.
Drifting Pick.....60, 10&5%
Hooks and—
Brass.....50&10%
Iron.....70%

FASTENERS, STORM SASH.

Schroeder's.....per dos. $0.85
Sensible..... " 1 15

FAUCETS—See Cocks.

FILES AND RASPS.

Delta.....70%
Kearney & Foot.....75&10%

FLUE STOPPERS—See Stoppers.

FORCEPS, PIG.

Superior.....per doz. $4 75
Whisson's Imp..... " 5 25

FORKS.

These goods are sold net this year.
Barley.
Steel New List.....65&10%
Wood, 4-tines, per doz.....$5 00
Coal, Coke, Cottonseed.....30%
Hay.
2-tine.....60%
3 " .....60&5%
4 " .....60&10%
Digging.....65&5%
Scoop.....30%
Header.
3-tine.....60&5%
4 " .....60&5%
Manure.
4-tine 60%
Ore.....40%
Spading.

FRAMES.

Hack Saw.
Union.....per doz. $5 75
Jenning's adj..... " 7 50
Cast..... " 2 50

FREEZERS, ICE CREAM.

Arctic.
Qts..... 1 2 3 4 6
Each...$1.10 1.30 1.50 1.80 2 30
Qts..... 8 10 12 15
Each.....$2.95 3.80 4.50 5.20

GAUGES

Butt and Rabbet.
Cream Pail.
Fairmont.....per doz. $3 75
Marking, Mortise, etc.....
.....50&10%
Saw.
Wire.
Disston's.....25%

GIMLETS.

Discount.....35@40%

GLASS, WINDOW.

Single..... 90&20%
Double.....90&25%

GLASSES, LEVEL.

GLUE.

Bulk.
B Amber.....per lb. 12 c
A White..... " 15 c
H. S. Amber..... " 16½c
Liquid.
Army & Navy.....40%
Le Page's—
List "A".....37½%
List "B".....33⅓%
List "C".....25%

GOODS.

Bright Wire.....90%

GREASE, AXLE.

Wood Boxes.
Diamond.....per gro. $5 50
Frazer's..... 9 50
Hub Lightning..... 5 25
Paragon..... 6 75
Wood Pails.
Frazer's, 15 lb. 80c; 25 lb. $1.30 each.
Hub Lightning, 15 lb. 55c; 25 lb. 70c each.
Tin Cans.
Chamellene Graphite.
1 lb. per gross.....$9 50
3 lb. per gross.....25 00
5 lb. per gross.....37 00

GRIDDLES.

Soapstone.....33⅓%

GRINDSTONES.

Family.
Inches..... 7 8 9
Per doz.....$8.25 9.00 10.50
Loose.
Per ton.....$20 00@$21 00
Mounted.
Ball Bearing..... 1 2 3
Each.....$3.15 3.00 2.85
Common Bearing 1 2 3
Each.....$3.00 2.80 2.65

GUN WADS
(See Ammunition.)

HAFTS, AWL.

Brad.
Common.....per doz. $0 19
Peg.
Common..... " 22
Patent, plain top..... " 47
Patent, leather top... " 52
Sewing.
Common..... " 22
Patent..... " 52

HALTERS.

Jute Rope.....per doz. $1 10
Sisal Rope..... " 1 85
Web..... " 2 00
Leather, rope tie..... " 8 50
Leather, leather tie..... " 11 50

HAMMERS, HANDLED.

Blacksmiths' Hand.
Plumbs.....60&5%
Engineers'.
Plumbs.....60&5%
Farriers'.
Plumbs.....40&10%
Machinists'.
Plumbs.....60&5%
Nail.
Plumbs.....40&7½%
Quaker City.....per doz. $3 50
Cast..... " 1 15
Maydole's.....30&5%
Riveting.
Plumbs.....40&12½%
Shoe.
Cast.....per doz. $0 75
Tack.
All Iron.....per doz. $0 35
Pol'd Iron, Hickory hdl. " 50
Mall. Iron, Inlaid..... " 1 55
Magnetic..... 1 2 3
Per doz.....$0.70 .80 1.00
Magazine.. .....per doz. 4 75

HAMMERS, HEAVY.

Heavy Hammers and Sledges.
Under 5 lbs .....80&5%
5 lbs. and over.....80&10%
Masons'.
Single and Double Face.....80&5%

HANDLES.

Auger.
Common Assorted....per doz. $0 38
Peck's Adjustable.... " 2 10
Ives' Adjustable.....per set, 1 35
Axe.....60%
Chisel.
Hickory, Tanged Firmer, Assorted, 33c; Large, 38c per dos.
Hickory, Socket Firmer, Assorted, 27c; Large, 30c per dos.
Applewood, Tanged, Firmer, Assorted, 29c; Large, 38c per doz.
Applewood, Socket, Firmer, Assorted .....per doz $0 24
Coal Pick.....50&10%
Drift ng Pick.....50&10%
File, assorted, 13c; Large, 16c per doz.
Hammer.
Adze Eye.....per doz. $0 40
Blacksmiths'..... " 40c@70c
Machinists'..... " 45c@70c
Hatchet..... " 40
Hay and Manure Fork.....30%
Hoe and Rake.....30%
Plain.....per doz. $0 75
Varnished..... " 80
Screw Driver.
Assorted..... " 37
Large..... " 48
Shovel and Spade.....33⅓%

HANGERS.

Barn Door.
Nansen.....60&10%
Matchless.....70&10%
Storm King.....60%
World's Best.....50%
Wagner's Adjustable.....70&10%
Warehouse.....60%
Conductor P.
Griffin.....70&10%
Iwan's Perfection.....50%
Eave Trough.
Baker's.....per gro. $2 35
Imperial.....20%
Wire.....33⅓%
Parlor Door.
Acme.....per set, $3 75
Ives' Improved..... " 2 50
Lane's Standard..... " 3 50
Lane's New Model.... " 3 10
Le Roy Noiseless..... " 4 00
Richards'.....40-10&5%

HASPS.

Hinge, Wrought.....40%
With Staples—See Staples.

HATCHETS.

Crown.....60-10&5%
Cast Claw.....per doz. $1 10@1 35
Cast Shingling.... " $0 85@1 10
Germantown.....30%

HAY KNIVES.

See Knives.

HAY RACK BRACKETS.

Wenzleman's No. 1.....per doz. $9 00
Wenzleman's No. 2..... " 9 00

HINGES.

Blind.
Clark's Gravity ... per doz. sets, 95c
Parker's.....65%
Shepherd's Noiseless, for Wood Casing.....per doz $1 05
Gate.
Clark's..... 1 2 3
Hgs & Ltch.. doz. $2.50 2.90 4.00
Hinges only... " 1.90 2.20
Latches only . " .70 .75
Knuckle.....per doz prs. $6 00
Leed's..... " sets 6 75
Superior..... " prs. 9 50
Spring.
American.....20%
Chicago.....25&5%
Columbia Dbl. Acting....40&10&5%
Gem.....25%
Ideal Detachable.....per gro. $11
Matchless.....30%
New Idea.....per gro. $8 00
Oxford.....20%
Wrought Iron
New Lists .....
McKinney
Light Strap Hinges.....60%
Heavy Strap Hinges.....65%
Light T Hinges.....55%
Heavy T Hinges.....45%
Extra Heavy T Hinges.....60%
Screw Hook and Strap.
6 to 12 in.....per 100 lbs. $3 75
14 to 20 in..... " " 3 65
22 to 36 in..... " " 3 40
Screw Hook and Eye.
⅛ in.....per 100 lbs. $6 75
⅙ in..... " " 7 75
¼ in..... " " 9 75

HOES

Garden .....70&10%
Grub.
Extra.....70%
Hazel.....per doz. $5 00
Ladies' and Boys'.....75%
Mortar.....75&10%
Planter's Eye.....62½%
Weed.....75&15%

HOLLOW WARE—See Ware.

HOOKS.

And Eyes.
Brass.....50&10%
Iron.....65&10%
Awning.....per gro. $1 00
Belt.
Brown's.....70&5%
Jones'.....65&5%
Bench.
See Stops, Bench.

Box.
Inch..... 6 8 10 12
Per doz.....$1.35 1.65 1.75 2.30
Humason & Beckley's..per doz. $2 50
(See Goods, Bright Wire.)
Bush.
Common Axe Handle.per doz. $7 00
Chain.
Inch..... ¼&5/16 ⅜ 7/16 ½
Per 100...$7.60-8.10 9.75 11.50 12.60
Clothes Lines.
Japanned .....per doz 22c@24c
Galvanized..... " 40c
Coat and Hat
Cast Iron . . . . per gro. 72c@$1 50
Gem Wire.....70%
Conductor.
Malleable.... . . . . .25%
Wrought.....20%
Corn.
Common, unpolished, per doz. $1 50
Little Giant..... " 3 25
Gate.
See Goods, Bright Wire.
Grass.
Common. Nos..... 2 3 1
Per doz.....$1.50 1.60 1.70
German.....per doz. 1 75
Little Giant..... " 2 75
Hammock.
With plate.....per doz. 50
With screw..... " 45
Lambrequin, or Drapery, per gro. .21c
Picture.....50%@50&10%
Potato and Manure.....70&12½%
Screw.
Brass.....80&5%
(See Goods, Bright Wire.)
Seat Spring .....per lb. 5½c

HOOPS, TUB.

Elastic . . . per case of 2 doz.... $1 50

HOSE, GARDEN.

		Coupled, per ft.
Heron, 3 ply-½" guar. press	55 lbs.	7½c
Crane.. " " "	75 "	8½c
Falcon " " "	95 "	9½c
Eagle " " "	120 "	10½c
Condor " " "	150 "	11½c
High Test " " "	200 "	12½c

COTTON COV. RUBBER HOSE.

High Grade-½"-guar. press.	400 lbs.	11½
Special " " "	300 "	9½c
Leader " " "	100 "	7½c

HUSKERS.

Boss.
Nos..... B BB E 200
Per doz.....$2.00 2.00 1.75 .80
Nos..... L PP P K
Per gro.....$5.40 6.00 6.00 10.50
Nos..... 2000 3000 O
Per gro.....$3.50 9.00 24.50
Nos..... 60 59 64 68
Per doz.....$2.15 2.15 .85 1.45
Brinkerhoff's.
Per gro.....$14 40
Clark's.
No..... 1 63 200 400
Per doz.....$0.40 .75 .75 1.75
Nos..... 200s 40s 3s 4s
Per doz.....$0.85 .50 1.25 1.25
Nos..... A AB P
Per doz.....$3.00 $4.25 $2.50

IRON.

See Metals.—First column.

IRONS.

Curling.
X.....per doz. $0 40
Y..... " 50
Z..... " 58
Jewel..... " 85
Imperial..... " 1 00
Pinking..... " 70
Plane.
Wood Bench.....20&5%
Sad.
Charcoal.....per doz.$11 00
Common, polished, per 100 lb. 4 50
Common, nickel plated, 5 25
Chinese Polishing.....per doz. 7 40
Laundry, No. 1..... " 5 75
Laundry, No. 2..... " 6 25
Mrs. Pott's,
No. 50 J. Enterprise, per set 93
No. 55 J. " " 90
No. 50 T. " " 1 00
No. 55 T. " " 96
Tailors' Sad.....per lb. 5½
Tailors' Geese..... " 5½
Tuyere.
Single Duck Nest.....per doz $5 25
Double Duck Nest . . " 6 25
Sutton.....each.... 2 60

JACKS.

Locomotive.....70%
Wagon.
Oliver,
Nos..... 0 00
Each.....$0.60 $0.80
Standard.
Nos..... 1 2
Each.....$0.60 1.00
Wilcox.
Nos..... 1 2 3
Each..... $0.85 1.20 2.90

KETTLES.

Brass.....15%
Cauldron.....40&5%
Copper..... per lb., 27c
Maslin.....65%
Sugar.....50%

KNIVES.

Beet Topping.
Clyde, 9-in. Scimiter Blade, doz.$3 85
California..... 3 40
Cooper's Hoop.....15%
Corn.
Clipper.....per doz. $1 75
Disston's..... " 2 75
Earle's..... " 3 00
Woodford..... " 2 25
Drawing.
Standard.....70%
Adjustable.....15%
Barton's Carpenters' 10%
Folding Handle.....25&5%
Hay.
American, Sickle Edge...doz. $10 50
Canton, Sickle Edge..... " 8 25
Heath's..... " 8 00
Iwan's, Sickle Edge..... " 9 50
Iwan's, Impv'd Serrated . " 10 00
Lightn'g, Holt's Genuine. " 6 50
Lightning Pattern..... " 6 00
Wadsworth's Sp'r Point.. " 8 50
Hedge.
Challenge.....per doz. $6 00
Disston's..... " 3 75
Mincing.
Common, Single..... " 40
Common, Double..... " 50
Streeter, 4-Blade..... " 1 30
Streeter, 6-Blade..... " 2 00
Putty.
Common.....per doz. $0 60@1 00
Lander's..... " 1 40@1 75
Scraping.
Beech Handle..... 75@1 00
Lander's..... 5 25@6 00

KNOBS.

Door.
Mineral.....per doz. $0 80
Porcelain..... " 90
Jet..... " 90

LADDERS.

Common Long.
Per ft.....9c@14c
Extension.
Per ft.....14c
Step.
Common, per ft.....7½c
Common, with Shelf, add 10c.
Keystone.....15c
Triumph, per ft.....20c

LANTERNS.

Bull's Eye Police.
3 -in. Flash Light....per doz. $6 00
2½-in. Regular..... " 4 90
3 -in. Regular..... " 5 50
Tubular.
Dietz & Hanes' . . ..net prices.

LEADERS, CATTLE.

Nos..... 1 2 3
Per doz..... $0 55 .70 2.75

LEATHER, LACE.

Cut.....33⅓%
Sides.
Ex. Quality .....per sq. ft., 27

LEATHERS, PUMP.

Valve and Plunger.....10%

LIFTERS.

Stove Cover.
Coppered.....per gro. 1 75@3 65
Ideal..... " 5 50
Alaska, Coppered " 4 00
Alaska, Nickeled. " 5 00
Transom.
Payson's.....80%

LINES.

Chalk.
Twisted in 20-ft. hanks.
Nos.... 4 6 7 8 9
Gross...$1.50 2 00 2 25 2 50 3 00
Twisted in 50-ft. balls.
Nos..... 1 2 3 4
Per doz.....25c 30c 35c 41c
Braided in 20-ft. hanks.
Nos..... 0 1 2 3
Per doz.....22c 25c 31c 35c
Mansons', in 100-ft. hanks...doz. 80c
Clothes.
60-ft. Jute.....per doz. $0 95
72-ft. Jute..... " 1 15
60-ft. Sisal..... " 1 40
72-ft. Sisal..... " 2 15
50-ft. Cotton..... " 1 15
50-ft. Braided Cotton. " 25

LINING, STOVE.

In Bricks .....per crate. 42c

MACHINES.

Boring.		Without Augers	With Augers
Angular.....	per doz.	3 00	4 40
Upright.....	"	2 60	4 00
Leather Riveting.			
Chicago, Pomeroy....	per doz.	$0 00	
Excelsior.....	"	2 00	
Handy.....	"	2 00	
Little Giant.....	"	3 00	
Pony, Pomeroy.....	"	7 20	
Washing.			
Winner.....	per doz.	54 00	
Keystone.....	"	54 00	
U. S. Steel.....	"	60 00	
Advance, f.o.b.Chicago	"	24 50	

MAIL BOXES.

See Boxes.

MALLETS.

Carpenters'.
Fibre Head, Small....per doz. $5 00
" " Medium. " 5 75
" " Large... " 7 00
Round Hickory..... " 2 25
" Lignumvitæ... " 4 00
Square Hickory..... " 2 25
" Lignumvitæ... " 4 50
Tinners'.
Applewood..... " 1 70
Hickory..... " 1.00@1 50
Hickory Sheet Iron... " 1 50

MATS

Door
National Rigid.....50, 10&5%
Acme Steel Flexible.....33⅓%
Stove.
No. 2.....per gro. $3 25
No. 1..... " 3 50
No. 1 Asbestos Toasters, or wire-covered Stove Mats, with handle.....per doz. 1 10
No. 2 Asbestos Toasters, with ring.....per doz. 60

MATTOCKS.

Plumbs.....65&10%
Extra.....60%

MAULS.

Iron, lbs.....	10	13	16	18
Per doz....	$4.00	4.50	5.25	5.60
Wood face, lbs.....	10	12	14	
Per doz.....	$5.00	5.50	6.00	

Wood Choppers'.
Lake Super'r & Oregon Pat. 75&10%

MEASURES.

	½ pk.	1 pk.	bu.
Galvanized, per doz.	$2.25	3.00	3.85
Japanned.. "	1.75	2.45	3.15

MICA.

First Quality.....40&5%
Second Quality.....50&5%

MILLS, COFFEE.

Enterprise.....25%
Parker.....40-12½&2½%
Arcade.....40-12½&2½%

MITRE BOXES.

See Boxes.

MOPS.

Erie.....per doz. $3 15
Handled Cotton.
Pounds..... 1 1 1½ 2
Per dozen....$2.00 2.35 2.65 3.25

MOWERS, LAWN.

Gladiator—B. B.
Inches..... 16 18 20
Each..... 6.50 7.25 8.00
King Universal—B. B.
Each..... 5.25 5.75 6.00
Inches..... 14 16 18
Big Giant..... 3.50 3.90 4.25
Little Giant..... 2.50 2.65 2.75
Philadelphia.
All Styles, except A & E, 60, 10&10%
Style A.....50&10%
Style E, High Wheel....60, 10&10%
Drexels.....40%
All Day .....Net Price

NAILS.

Cut Steel .....rates, $2 50
Cut Iron..... 2 60
Wire.
Small Lots..... $2 28
Carload Lots..... 2 18
Cement Coated..... 2 30
Horse Shoe.
Ausable.....55&5%
Capewell.....15%
Perfect.....55&5%
Putnam.....20&5%
Star.....35&5%
Clover Leaf ..... per lb., net, 10½c
Picture.
Brass Heads.....25%
Brads.....85%
Furniture.....15%

NAIL PULLERS.

See Pullers.

NAIL SETS.

See Sets.

NETTING, POULTRY.

Galvanized beforeweaving .80,10&2½%
Galvanized after weaving.....80&7½%
Cut Pieces.....65&5%

NIPPERS.

End Cutting.
Stubb's Pattern. Inches 5½ 6
Per dozen..... $4.00 4.25
End and Diagonal Cutting.
Swedish Side.....75%
Utica Drop Forge & Tool Co.. . .60%
Hoof.
Heller's.....40&10%
V. & B.....55&5%

NOZZLES.

Hose.
Genuine Gem.....per doz. $3 90
Magic..... " 3 60
Mystic..... " 3 00

NUTS, HOT PRESSED.

Square Blank.
In ¼ 5/16 ⅜ 7/16 ½ ⅝ ¾
lb 9½c 8c 6½c 5½c 5½c 5c 4½c
Square Tapped.
In. ¼ 5/16 ⅜ 7/16 ½ ⅝ ¾
lb. 12½c 10½c 8c 7½c 6½c 6½c 6c
For 5-lb. boxes add ½c per lb. to above prices.

OILERS.

Chase Pattern.
Brass and Copper.....60%
Zinc.....60%
Engineers'.
Cannon.....55%
Tin . . . .per doz. $2 00@$2 25
Machine.
Common.....per doz. $0 58
Copper Plated Steel... " 1 00
Malleable Iron.....60, 10&5%
Japanned.....65@75c

OPENERS.

Box.
Inches..... 10 12 14
Flat.....per doz. $2.85 3.60 4.15
Round.... " 2.10 2.25 2.75
Can.
Delmonico .....per doz $1 30
Never Slip..... " 65
Crate.
V. & B..... " 5 75

OUTFITS, COBBLING.

Combination.....per doz. 11 00
Economy..... " 4 65
Family..... " 9 75

PADLOCKS.

Standard Wrought.....75&5%
Champion.....50%
Eureka.....40, 10&5%
Yale.....60&5%

PAILS.

Cream.
14-qt , without gauge, per dos. $2 50
20-qt., " " " 3 00
20-qt., with gauge.... " 3 50
Sap.
10-qt., Galvanized, per 100....$13 00
12-qt., " " 14 50
14-qt., " " 16 25
16-qt., " " 17 75
10-qt.,IC Tin..... " 10 25
12-qt., " .... " 11 75
14-qt., " .... " 13 00
16-qt.,IX Tin.... " 12 75
12-qt., " .... " 16 00
14-qt., " .... " 17 00
Stock.
Galv'd, qts. 14 16 18 20
Per doz..... $3.75 4.00 4.75 5.25
Water.
Galvanized... qts. 10 12 14
Per doz..... $1.95 2.20 2.45
Wood.
Cable, 2-Hoop.....per doz. $1 70
Cable, 3-Hoop..... " 1 90
Cedar, 3-Hoop..... " 2 85
Standard, 2-Hoop.... " 1 00
Standard, 3-Hoop.... " 1 80

PANS

Dripping.....60&5%
Fry
Common .....75&10%
Acme 70%
Roasting.
Paxton,
Nos..... 1 2 3 4
Per doz.... $4.75 5.75 6.50 7.50
Neverburn . . 4.00 4.50 5.50 6.00
Savory, No. 200.....per doz. $8.00

PAPER.

Building.
Plain.....per 100 lbs. $1 25
Tarred..... " 1 35
Tarred Felt..... " 1 05
No. 20, Red Rosin....per roll, 40
No. 30, Red Rosin.... " 55
Sand and Emery.
Star ..... low list, 50%
B. & A.....50%
Wrapping.
Drab Fiber.....per lb. 00 08
Manila..... " 0 00

PARERS.

Apple.
Bay State.....per doz. $13 00
Turntable..... " 6 00
White Mountain..... " 5 00
Reading..... " 7 00
Potato.
Goodsell's Saratoga, 10½ in., doz. 6 50
Goodsell's Saratoga, 5 in., doz. 5 50

PICKS.

Adze Eye Ore.....70%
Drifting and Poll Picks.....70%
Plumbs, Railroad.....70%
Surface.....70%

PINCERS.

Carpenters', cast steel.

Inches.....	6	8	10	12
Per doz.....	$2.00	2.60	2.95	3.75

Blacksmiths'.....45%
Heller's.....40%

PINS.

Clothes.
Common.....per box of 5 gro $0 52
Hoyt's..... " " 31
U. S..... " " 70
Picket.
Fluted, 15-in.....per doz. $0 70
Fluted, 21-in..... " 1 60
Spiral..... " 1 90

PIPE.

Conductor.

	Gal. Steel	Charcoal
L. C. L. to Dealers:—		
Eastern	.70&10%	.50&10&2½%
Pittsburgh	.75&10&5%	.....60%
Central	.75&10%	.....60%
Northwestern	.75&7½%	.....60%
Western	.70&12½%	.....50&12½%
Tennessee	.70&10%	.....50&12½%
Southern	.70%	.....50&12½%
Southwestern	.70%	.....50&5%

Terms 60 days; 2% Cash 10 days.
Factory shipments generally delivered.

Lead.
Full coils .....per lb. 7½c
Cut coils..... " 7½c
Stove

Acme—Inches....	5	6	7
Smooth, per jt...	8½c	9½c	10½c
Planished, "	32 c	33 c	43 c
Peerless—Smooth,	7½c	8 c	9½c
Polished	14½c	15½c	18 c
Planished	28 c	31 c	35½c
Made-up—Inches..	5	6	7
Smooth	7½c	8 c	9½c

7 to 6 in. Smooth Tapers, pr jt...13c
6 in. Smooth T's..... " 27c
7 to 6 in. Planished Tapers.....45c

Yale Patent Lock Pipe—Stove.

Blue Steel:	5"	6"	7"	7" to 6"
	Cents			
Battle Axe Blue...	7	7½	9½	10½
Can't Slip " ..	7½	8½	10	11
Peerless " ..	7½	8½	10	11
Duplex " ..	10	11	13	14
Yale, Rus. Fin....	15	16	17	18
Duplex Planished.	29	31	37	38
Galvano, Gal.....	15	16	17	18

If wanted made up, add per joint or grooved, 1c; riveted, 1½c. Grating made-up pipe extra.

Wrought Iron Gas Pipe.
⅛@½-in., black.....discount, 60%
⅛@½-in., black..... " 60,10&5%
⅝-in. to 6-in., black... " 70%
7-in. to 12-in., black... " 62½%
⅛@½-in., galvanized.... " 42%
⅛@½-in., galvanized.... " 50%
⅝-in. to 6-in., galvan'd " 57½%
7-in. to 12-in., galvan'd " 45%

PLANES.

Sargent Iron Bench.....60%
Stanley Iron Bench .....25&5%

PLATES, TIN.

See Metals in Column 1.

PLIERS.

Button's—Ins..	4½	6	8	10
Per doz.....	$2.75	3.35	4.15	5.15

Button's Pattern.

Inches.....	4½	6	8	10
Per doz.....	$2.25	2.75	3.25	4.25

Cutting.
Bernard's.....30%
Lodi.....50%
End and Diagonal Cutting
Swedish Side.....70%
Utica Drop Forge & Tool Co....50%
Fencing.
Farmers' Choice.....per doz. $8 00
Russell's..... " 8 25
Flat and Round Nose.
Bernard's.....30%
German.....65%
Lodi.....50%
Paragon.....50%

Gas—Inches..	7	8	10	12
Price.....	$3.00	3.50	4.50	5.50

Tinners'.
Hollow.....40%
Solid.....each, 5½c

PLUMBS AND LEVELS

Common .....60&10&10%
Cook's.....40%
Davis' Iron 25%
Davis' Inclinometer.....15%

POINTS

Drive Well Points.....75&5%

POKERS, STOVE.

Wr't Steel, str't or bent, per doz. $0 55
Wr't Steel, wood hand'ls " 80
Nickel Plated, coil hand'ls " 65

POKES, ANIMAL.

Cracker Jack, wr't steel, per doz. $4 50

POLISH.

Metal.
A-B Oil Metal Polish, 4-oz. bottles, 3 doz. case, per gr. $9 00
1-gal. can..... 90
White Silk, half pints, per doz, $2 00
White Silk, 6-oz. cans, per doz. 1 00
Shoe.
M. C. D.....per doz.....36c@50c
F. C. O..... " 40c
T M..... " .55c@$1 75
Imperial.....per gro 5 00
Stove.
A-B Polishes.
Liquid Stove Polish.
3 doz. in case..... $2 25
6 " " .....gr., 9 00
Fireproof Stove Polish, 3 and 6 doz. in case.....gr., 12 00
Liquid Waterproof Stove Polish, 10-oz. cans, per gro., 12 00
Oil Paste Polish.
6-oz. cans, 3 doz. case..... 3 25
1-lb. " 3 " " 3 75
5-lb. " per can..... 50
Dry Powdered Stove Polish.
5-lb. box..... 75
100-lb. bbls.....per lb. 12
Powder Polish. 3 doz. 6 do. 12 doz.
$2.25 $4.50 $9 00
Water Paste Stove Polish, ½-lb. boxes, 3 doz. case..per gro., 12 00
Black Eagle, 1-lb. cans, pr gr, $15 00
Black Silk—
5-lb. pail..... $0 70
Paste, 5-oz. cans.....per doz. 75
Paste, ½-lb. cans .... " 1 05
Liquid, ½-pt. cans... " 1 05
Liquid, 6-oz. cans... " 75
Black Jack, ½-lb. cans. " 9 25
Dixon's Carb. of Iron. " 5 75
Nickel Plate..... " 4 50

POPPERS, CORN.

Round or Square, 1-qt. per doz. $1 05
Square, 1½-qt..... " 1 15
Square, 2-qt..... " 1 30
4-qt..... " 3 75

POTS, FIRE.

Clayton & Lambert's, each, $4 75@6 25
Gate City.....each, 6 25
Gem.....each, $6 75@8 50

POWDER.

See Ammunition.

PRESSES, FRUIT AND JELLY.

Enterprise Manufacturing Co.....25%

PRIMERS

See Ammunition.

PRUNERS.

Disston's Pole.....per doz. $6 50
Henry's Improved..... " 75&10%
Water's Improved..... " 80%

PULLERS.

Cork.
Daisy..... each, $3 10
Phœnix..... " 1 40
Quick and Easy..... " 2 70
Nail.
Giant.....per doz. 10 50
Giant Pattern..... " 6 00
Jumbo..... " 9 00
Tack—Giant ..... " 40

PULLEYS.

Awning—Jap'd.....60%
Clothes Line.....50&10%
Hay Fork.
Iron Wheel, 5-in.....per doz. $1 75
Wood Wheel, 6-in.... " 1 75
Wood Wheel, 6-in., pass knot, ...per doz. 2 15
Hot House—Jap'd.....50&10%
Screw—Jap'd.....60%
Side—Jap'd.....50&10%
Sash.
Common.....per doz. $0 20
Common-Sense, 2-in.. " 20
Empire Pattern, 2-in.. " 20
Ideal..... " 20
Steel..... " 25

PUMPS.

Pitcher Spout.

Nos.....	1	2	3	4
Each.....	$1.00	1.15	1.30	1 70

Spray.
Blizzard.....per doz. $14 50
Cyclone, tin..... " 3 40
Cyclone, copper..... " 6 75
Daisy..... " 9 00
Little Giant.....each,... 2 25

PUNCHES.

Conductors'.
No 22.....per doz $2 25
Machine.....per lb 19
Saddlers'.
Common ... .per doz 60c@70c
Good..... " 72c@84c

PUTTY.

In Bladders.
Strictly pure.....per 100 lbs. 2 35

RAIL.

Barn Door.
Matchless, 1-in..... 7 c
Matchless, 1½-in..... 8½c
Storm King..... 4 c
Sliding Door.
Painted steel.....per ft. 4½c
Bronzed wrought iron...per ft. 8½c

RAKES.

Coal or Wood.....per doz. $5 20
Garden.
Steel.....70%
Steel, bow.....70%
Malleable iron, heavy.....60&10%
Hay.
Wood.....$1 50@$2 00
Lawn—Wood.
XXX.....per doz. $3 00
Automatic..... " 5 25
Lawn Queen..... " 2 75
Jumbo, 36 teeth..... " 5 25

RASPS—See Files.

RAZORS.

Bo-ras-ic.....50%
Red Devil.....50%
Tree Brand.....50%

REGISTERS.

List December 5, 1904.
Black and White Japanned, Reg. and Border 70%
On Face .....75&10%

RINGS.

Bull.

Copper.....	2½ in.	3in.
Per doz.....	$1 10	$1 40
Rea's Improved Self-Piercing copper, pr doz	2 00	....
Steel, per doz.....	85	95
Nickel plated.....	1 35	....

and Ringers—Hog.
Blair's Rings.....per doz. $0 58
Blair's Ringers..... " 75
Brown's Rings..... " 50
Brown's Ringers..... " 80
Champion Ringers.... " 1 60
Hill's Ringers..... " 70
Hill's Ring, boxes.... " 47
Major Rings..... " 60
Perfect Ringers..... " 95
Wolverine Rings..... " 1 40
Wolverine Ringers.... " 80
Fruit Jar.
White.....per lb.....30c
Key.
Split, round.....per doz. $0 17
Split, square..... " 32
Ball, round..... " 32

RIVETS.

and Burrs.
Copper Belt.....40%
Coppered Iron.....60&10&5%
Tinners'.....60&10%
Hame.....per lb. $0 10
Slotted Clinch per doz 40c@45c
Tubular
Nos 1 and 2 assorted sizes, doz, 45c

RIVET SETS

See Sets.

ROPE.

Cotton.
¼, 5-16 in. Com on reels. .per lb. 11½c
¼, 5-16 in Com. in coils. . " 12 c
¼, 5-16 Imperial in coils.. " 21 c
Sisal.
1st Quality .....12 c
Hardware Grade, rates, per lb...10 c
Pure Manila.
1st quality.....per lb. 15½c
Hardware Grade, rates... " 14½c

RULES.

Boxwood.....80&10%
Ivory.....

SASH WEIGHTS.

See Weights.

SAWS.

Back.
Disston's.....25%
Jackson's.....25%
Butchers'.
Disston's.....30%
Circular.
Disston's.....50%
Hiles'.....50&10%
Compass.
Common.....per doz $1 35@1 60
Disston's .....%25
Cross-Cut
Disston's.....45%
Dehorning.
Disston's.....per doz. $5 75
Hack.
Disston's.....25%
Keystone.....30%
Hand and Rip.
Brown's.....30%
Disston's No. 7.....30%
Disston's Nos 8, D8, 12, 76, 112, D100, and 120 (new list).....25%
Keystone.....30%
Enterprize, hand.....per doz. $5 00
Our Saw, hand..... " 4 00
Our Saw, rip..... " 4 50
Keyhole—Disston's.....25%
Kitchen.
Sterling 25%
One Man.....50%
Panel
Brown's 30%
Disston's No. 7.....30%
Disston's No. D100.....25%
Pruning.
Brown's 25%
Disston's 25%
Wood
Common.....per doz. $4 50
Clover Leaf..... " 6 00

SAW BUCKS—See Bucks.

SAW SETS—See Sets.

SAW TOOLS—See Tools.

AW FRAMES.

Common, plain.....per doz. $1 25
Common, painted..... " 1 70

SCALES.

Counter.
Pelouze.....40&10%
Platform.
Osgood.....50%

SCOOPS.

Grain.
½-bu. "Hercules".....per doz. 13 70
1-bu. "Hercules"..... " 15 00

SCRAPERS.

Box.
Triangular.....per doz. $4 00
Cabinet.
Cast Steel . . . . per doz , 60c@75c
Road.

Cubic ft.	7	5	3
Without run's, ea.	$4.00	3.75	3.50
With runners, ea..	4.25	4.00	3.75

SCREWS.

Bench.

Iron, in.....	1	1½	1¾
	$3.50	4.00	4.75

Wood, white maple...per doz. $3 50
Hand—Wood.....10%
Hand Rail.....60&10%
Jack.....70&10&5%
Lag or Coach—all sizes, gimlet pointed.....75&5%
Saw—Centennial

Nos ..	1	2	3	4	5	6
Per doz.	18c	20c	25c	30c	23c	25c

Wood.
F. H. Bright.....87½&5%
R H Blued.....85%
F. H. Jap'd.....82½%
F. H. Brass.....85%
R. H. Brass.....80%
R. H. Nickel Plated.....75-10%

SCYTHES.

Be Ve Be, grass.....per doz. $8 50
Clipper, grass..... " 8 00
Clover Leaf Dutchman. " 8 00
Honest Dutchman..... " 3 00
Be Ve Be..... " 4 00

SHAVING SETS.

Smith & Hemenway.....60%

SETS.

Nail.
Round, common.....per doz. $0 3
Square, common..... " 4
Octagon, common.... " 3
No. 5, square..... " 7
Cup point, knurled... " 7

Rivet.
Farmers'.....per doz. $1 2
Tinners'.....50&10%

Saw.
Aiken's Pattern.....per doz. $3 5
Common Lever..... " 1 2
Disston's Monarch.... " 6 5
Disston's X Cut ..... " 12 0
German..... " 1 0
Morrill's Old Style.... " 5 00
Morrill's Pattern..... " 3 25
Leach's..... " 80
Nash's Hand..... " 3 15
Nash's X Cut..... " 4 20
Stillman's Lever..... " 1 30
Stillman's X Cut..... " 2 50

SHARPENERS, SKATE.

Diamond.....per doz $1 60
Smith & Hemenway 20%

SHAVES, SPOKE

Iron.....per doz $1 10@1 85
Wood ..... " 2 75@4 75
Bailey's .....50&5%
Goodell's 15%

SHEARS

Pruning
Buckeye, No. 1.....per doz $5 75
Buckeye, No. 2..... " 7 40
California Pat., 9-in.. " 3 20
Cailfornia Pat., 10-in.. " 4 00
Draw Cut, No. 3..... " 13 75
Draw Cut, No. 4..... " 16 50
Henry's Pat. 0 01 14 012
Per doz.....$1.40 2.10 2.00 2.80
Star.....per doz $4 00

Sheep—No BBA.
Inches..... 6 6½ 7
Reg. Grip.....$11.25 11.50 12.00
Nar. Grip.,doz.... 11.00 11.25 12.25

Tinners'—See Snips.

SHEAVES, SLIDING DOOR.

Common.
Inches..... 3 4 5
Per set..... $0.34 .42 .70

Hatfield's.
Per set..... $0.75 1.00 1.00

SHELLS—See Ammunition.

SHELLERS, CORN.

Union.....per doz. $6 75

SHIELDS.

Expansion Bolt Shields.....50&10%

SHOES.

Conductor.....60&10%

SHOE POLISH—See Polish.

SHOT—See Ammunition.

SHOVELS AND SPADES.

Coal.
No 2 Woodford.....per doz. $5 50
No. 182..... " 6 00
Ames' new list .....Discount, 12½%
Per doz.
Neverbreak, hollow bck, blk. $15 75
National.... " " " 14 75
Buckeye.... " " " 10 00
Mohawk.... " " " 9 00

Drain.
Iwan's Perfection.....50%

Railroad, etc.
Black Diamond.....per doz. $1 50
Crescent..... " 5 75
Keystone..... " 8 75
Star..... " 4 75
Vaterland..... " 9 50
Hollow Back..... " 4 75
Ames, new list .....Discount, 12½%

Snow.
Per doz.....$1.65@$9.00

Alaska Steel.
D Handle.....per doz. $3 50
Long Handle..... " 3 00

SINKS.

Cast Iron.
Painted.....50&10%
Enameled, White.....50&10%

Wrought Steel.
Painted, new list.....40-10&5%

SLEDGES—See Hammers.

SNAPS, HARNESS.

Champion.....33⅓%
German Pattern.....30&5%
Judd's Pattern.....50%

SNATHS.

Double Ring, Bush.....per doz. $6 00
Patent Loop, Bush..... " 5 75
Patent Loop, Grass..... " 5 50

SNIPS, TINNERS'.

Clover Leaf.....40&10%
National.....40&10%

SOLDER—See Metals.

SPRINGS, DOOR.

Perfect.
Nos..... 1 2 3 4
Per doz.....30c 35c 40c 54c

Reliance.
Per doz ... light, $1.35; heavy, $2 50

Star.
Per doz .... light, 90c; heavy, $1 35
Torrey's.....per doz. $1 35
Warner's No..... 11 13
Per doz..... 75c $1 35

SQUARES.

Steel and Iron.....70&10%
(Add for bluing, $2.50 per doz., net.)

Miter.

Try.

Try and Bevel.

Try and Miter.
Fox's.....per doz. $5 75
Winterbottom's.....70%

SQUEEZERS, LEMON.

Common Wood.....per doz. $0 70
Porcelain Lined, Wood.. " 1 25
Boss, malleable iron.... " 1 20
Iron Frame, porc'n bowl " 1 90
Iron Frame, glass bowl . " 2 35
Little Giant, tin'd iron . " 4 00
Drum, japanned..... " 3 60
Drum, nickel plated ... " 4 50

STAPLES

Blind.
Barbed.....per lb . . .9¼@9½c

Butter Tub,..... " .....8 @8½c

Fence—less than carload.
Polished.....per 100 lbs. $2 30
Galvanized..... " 2 60

Netting.
Galvanized.....per 100 lbs. 4 00

Wrought.
Wrought Staples, Hasps and Staples, Hasps, Hooks and Staples, and Hooks and Staples.....80-10&10%
Extra heavy.....75&10%

STEELYARD.

Discount 25%.

STONES.

Axe.
Hindostan.....per lb 5½@7 c
More Grit..... " 9½c
Washita ..... " 17 c

Emery.....60% @60&5%

Oil—Mounted.
Arkansas Hard.....per doz.$23 00
Arkansas Soft..... " 15 50
Hindostan .....per lb 6¼@6½

Oil—Unmounted.
Arkansas Hard.....per lb $2 05
Arkansas Soft ..... " 1 10
Lily White..... " 45
Queer Creek..... " 15
Ouachita..... " 38
Washita..... " 26

Sythe.
Black Diamond.....per gro. $8 00
Crescent..... " 4 25
Gem Corundum..... " 7 50
Green Mountain..... " 4 50
La Moille ..... " 7 00
Quinnebog..... " 5 00
Red End ..... " 3 75

STOPS, BENCH.

Hotchkiss'.....per doz. $3 50
Stearns'..... " 4 75

STOPPERS, FLUE.

Common.....per doz. $0 40
Crown..... " 45
Gem, flat, painted..... " 85
Gem, cor'd, decorated... " 70
Kirch's..... " 90
Perfect..... " 70@85
Skinner's Common Sense " 80

STOVE PIPE—See Pipe.

STOVE BOARDS—See Boards

STOVE POLISH—See Polish.

STRAPS.

Scoop.....per doz prs., $1 85
Skate..... " " 60@70c

STRETCHERS.

Carpet.
Bullard's.....per doz. $3 90
Excelsior..... " 5 25
Malleable Iron..... " 70
Perfection..... " 6 30
King..... " 4 50

Wire.
N. S. Elwood's.....per doz. $6 00
O. S. Elwood's..... " 6 00
Little Giant..... " 8 75
Safety..... " 10 00
Star Lever..... " 6 25
Canton Tackle Block. " 9 50
Warner's ..... " 6 25

SWIVELS.

Malleable Iron.....per lb. $0 70
Wrought Steel.....per gro. 4 50

TACKS.

American Cut.....90&15%
American Wire.....85&20%
Bill Posters Cut.....90&20%
Blued Carpet.....90&10%
Tinned Carpet.....90&10%
Gimp.....90&10%
Upholsters' Cut.....90&20%
Upholsters' Wire.....90&10%
Double Pointed.....90%
Copper.....per lb. 32c
Canvas Nails.....75&5%
Clout Nails.....75&10%
Hungarian Nails.....80%

TAPES, MEASURING.

Asses' Skin.....40&10%
Bend Leather.....20%
Patent Leather.....20%
Lufkin's Steel.....25%
Lufkin's Metallic.....30%

TEE BEVELS—See Bevels.

THERMOMETERS.

Tin Case.....per doz. 80c@$1 25
Wood Back..... " $2.00@12 00
Glass..... " 12 00

TIES.

Bale.
Single Loop.....80&5%
All other kinds.....70%

Cow—See "Chains."

TOOLS, SAW.

Disston's Universal.....40%

Miniature.
Smith & Hemenway.....25%

TRAPS.

Fly.
Ballon.....per doz. $1 25
Harper's..... " 1 25

Game.
Newhouse.....40&10%
New Victor.....70&10%

Mole.
Reddick's.....per doz. $6 00

Mouse and Rat.
Wood Choker ..per doz. holes $0 13
Tin Choker..... " " 75
Delusion.....per doz. 1 15
Marty Rat..... " 6 25
Marty Rat Imitation. " 3 50
Marty Mouse..... " 3 00
Marty Mouse Imitation " 2 00
Hold-em, wire rat.... " 3 75

TROWELS.

Brick.
Clover Leaf.....30%
Brade's.....15&5%
Disston's.....30%
Rose's.....20%

Plasterers'.
Clover Leaf.....40%
Disston's.....25%
W. & McP.....25%

TRUCKS.

Bag.....each, $2 75
Handy..... " 1 85
Warehouse.....50&10%
No..... 1 2 3
Half Ironed..... $3.00 3.85 5.50
Full Ironed..... 3.35 4.50 6.45

TUBS, WASH

Standard, Wood. Ex.
Nos..... s 2 1 large
Per doz.....$5.00 6.00 7.00 9.50

Dowell.
Per doz..... 5.35 6.35 7.00 9.50

Cedar.
Per doz..... 6.10 7.10 7.90 10.80

Indurated.
Per doz..... 8.55 9.45 10.80 13.50

Galvanized.
No..... 1 2 3
Per doz.....$6.00 6.75 7.75

TWINE.

Per lb.
3-ply Cotton Wrapping 25c
4 " " " 25c
" " Extra Wrapping.....27c
4 " " " Hvy. Wrapping 25c
4 " " Wrapping on tubes....27c
3 " " " " cones.....25c
4 " " " " " 25c
India Hemp, ¼-lb. balls 19c
" " ½-lb. " 18c
" " ½-lb. " .....doz. 75c
2-ply Jute, ½-lb. " 14c
3-ply Jute, ½-lb. " 13c
Jute Wrapping, ½-lb. balls.....14c
Jute Wool, ½-lb. balls.....9½c

Seins.
Nos..... 9 12 15
Soft.....per lb 26½ 26 25
Med..... " 26½ 26 25
Hard..... " 27 26½ 26
Staging, ½-lb. ball, size 21.....26½c
" " " " 24.....26c
" " " " 27.....26c
Bagging " " 25c
3-p y "B" in hanks 18c
4- " "B" " 18c
3 " "A" " 27c
3 " Silver Finish, in hanks..37c

Fodder or Lath.
130 strand.....6½c
200 strand.....—c

VISES.

Phœnix.....30%
Phœnix Oval Slide,
Inches..... 2½ 3 3½ 4½
Each..... $1.25 1.50 1.85 2.75
Parker's Parallel.....18&20%
Parker's Victor.....15%
Parker's Combination.....75%
Solid Box.....40&5%
Adams' Mechanics'.....each 2 50
Williamson's Universal.....60%

WARE.

Stove Hollow Ware.
Plain or Unground.....50%
Ground Ware.....45%
Enameled Ware.....33⅓%

Country Hollow Ware, per 100 lbs. $3 00

White Enameled Ware.
Maslin Kettles.....60&10%

Covered Ware.
Tin'd and Turn'd.....35&10%
Enameled.....45&10%

Glue Pots,
Tinned..... .....25%
Enameled.....30%

Enameled.
Cherry Blossom and Chrysolite..50%

WASH BOARDS—See Boards.

WASHERS.

Standard O G, cast iron . . .per lb. 2½c
Wrought iron in bulk, per lb.:
In. ⅜ ½ ⅝ ¾ ⅞ 1
9c 6½c 6c 4½c 4½c 4½c 3½c
Wrought steel in 5-lb. boxes, per lb.:
In. ⅜ ½ ⅝ ¾ ⅞ 1
10c 7c 6c 5½c 5c 5c 4½c

WASHING MACHINES—See Machines.

WEDGES.

Ax.....per doz. $0 30
Galling.....per lb. 10½
Saw..... " 8½

WEANERS.

Calf.
Fuller's, per doz.....$2 00 to $2 50
Tyler's Safety, per doz 1 85 to 2 40
Carroll's, per doz..... 3 00 to 3 75
Standard, per doz..... 3 00
Hoosier, per doz..... 3 50 to 4 00

WEIGHTS.

Hitching.....per lb. 2½c
Sash—f.o.b. Chicago....pr ton, 26 50

WHEEL BARROWS.

Common Railroad.....per doz. $17 00
Heavy Railroad..... " 24 00
Panama Steel Tray.... " 30 00
Klondike Steel Tray.. " 28 00

WHEEL BARROWS.

Common Railroad.....per doz. $17 00
Heavy Railroad..... " 24 00
Panama Steel Tray.... " 30 00
Klondike Steel Tray.. " 28 00

WHEELS.

Corundum.....70&10&5%
Emery.....75&5%
Well. Inches.. 8 10 12 14
Per doz..... $2.40 3.25 4.00 6.00

WIRE.

Barbed. Painted. Galv'd
Carloads .. per 100 lbs. $2.33 $2.63
Less than car " 2.43 2.73

Brass.
In coils.....20%
In 1-lb. spools, new list.....50%

Broom—Tinned .. . 60&10&10&10%

Cable—Same price as Barbed Wire.

Copper.
In coils.....20&10%33⅓%
1-lb. spools, new list.....50&10%

Fence—Smooth.
Nos. 6 to 9, An'eal'd, pr 100 lbs. $2 30
Nos. 6 to 9, Galv'd.. " 2 60

Hair—New List.....50%

Market.
Bright, full bdles.....70&5%
Bright, broken bdles.....70%
Coppered, full bdles.....70%
Coppered, broken bdles.....65&10%
Tinned, full bdles.....75&5%
Tinned, broken bdles.....65&10%

Picture—In coils .... 80%@80&10%
In 5-lb. spools.....per lb.....26c

Plain—Small lots..... $2 10
Car lots..... 2 05
Small spools 5c per 100 higher.

WRENCHES.

Acme Standard.....60%
Alligator No. 1.....85cnet
Always Ready.....50%
Coe's Standard.....40&10&5%
Agricultural.....75&5%
Ellis Adjustable.....25%
Malleable "S".....per lb. 08c
Malleable..... " 08c
Stillson Pipe.....70%

WRINGERS.

No. 22, Guarantee....per doz. $62 50
No. 110, Guarantee.... " 32 50
No. 110, Brighton..... " 23 50
No. 110, Bicycle..... " 31 50
No. 500, Royal..... " 32 50
No. 350, Universal..... " 28 00
No. 300, Novelty..... " 28 00
No. 310, Keystone..... " 28 00
No. 100, Rival..... " 23 50

ADVERTISERS' INDEX.

ALPHABETICAL LIST.

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Allen Mfg. Co. 8
American Rolling Mill Co. 55
American Sheet & Tin Plate Co. 53
American Steel & Wire Co. 19
American Stove Repair Works 52
Armstrong-Blum Mfg. Co. 60
Auld & Conger Co. 53
Avery Stamping Co. 1
Baker, McMillen Co. 63
Berger Bros. Co. 60
Berger Mfg. Co. 56
Bertsch & Co. 60
Bitck-Williams Co 53
Boynton Furnace Co. 2
Brauer, A. G., Supply Co. 33
Buckeye Paint & Varnish Co. 62
Burt Mfg. Co. 51
Burton, W. J., Co 68
Butler Bros. 66
Canton Art Metal Co. 58
Canton Mfg. Co. 58
Carver File Co. 1
Chicago Stove Works 9
Clark, Quien & Morse 57
Clayton & Lambert Mfg. Co. 60
Cleveland Castings Pattern Co. 52
Cohn & Co., G. 4-5
Cole Manufacturing Co. 3
Columbus Bolt Works 1
Commercial Mfg. Co. 58
Conners, Wm., Paint Mfg. Co. 1
Cope, Geo. W., Stove Pattern Wks. 52
Cortright Metal Roofing Co 59
Delphos Mfg. Co. 59
Denning Wire & Fence Co. 61
Detroit Heating & Lighting Co. 51
Dieckmann, Ferdinand 57
Disston, Henry & Sons 63
Dixon, Jos., Crucible Co. 51
Dries & Krump Mfg. Co. 60
Droescher, S. R. 62
Electra Lightning Rod Co. 61
Eller Mfg. Co. 58
Enterprise Mfg. Co. 67
Evans Stamping & Plating Co. 52
Ferrosteel Co. 17
Floyd-Wells Co 11
Follansbee Bros. Co. 68
Forest City Foundry Co 12
Foster Stove Co., The 7
Foster & Sons Co., Wm. 57
Fox Furnace Co., The 13
Foy, E. A. & Co. 61
Friedley-Voshardt Co. 59
Gerock Bros. Mfg. Co. 59
Globe Ventilator Co. 68
Gray's School 59
Green Co., A. H. 62
Green Foundry & Furnace Works 18
Griffin Mfg. Co. 63
Harrington & King Perforating Co 60
Haynes-Langenberg Mfg. Co. 11
Hemp & Co 52
Henry & Scheible Co 17
Hooper, C. N. 52
Howes Co., S. M. 63
Hungerford, U.T., Brass & Copper Co. 53
Hussey & Co. 60
Ideal Epworth Acetylene Co. 53
Interstate Manufacturing Co. 15
Iwan Bros 61
Keighley, Metal Ceiling Co., S. 58
Kelsey Heating Co. 14
Kimball Bros. Co. 52
La Crosse Steel Roofing Co. 57
Lalance & Grosjean Mfg. Co. 64
Landay Steel Range Co. 7
Lawson Mfg. Co. 1
Lufkin Rule Co. 63
Magee Furnace Co. 13
Maher & Son Lightning Rod Co. 61
Manufacturers' Stove Repair Co 52
March-Brownback Stove Co. 15
Merchant & Evans Co. 57
Michigan Safety Furnace Pipe Co. 15
Milwaukee Corrugating Co. 55
Modern Improvements Mfg. Co. 61
Monitor Stove & Range Co. 6
Monroe Foundry & Furnace Co. 16
Mueller, L. J., Furnace Co. 18
Munsell, & Co., Eugene 16
National Sheet Metal Roofing Co. 53
Niagara Machine & Tool Wks. 60
Nickel Plate Stove Polish Co. 9
North Bros. Mfg. Co. 62
Northwestern Stove Repair Co. 52
Obermayer, S. Co. 52
Ohio Stove Co. 5
Paxton & Gallagher Co. 9
Peck, H. E. 50
Pittsburgh Steel Co. 61
Portsmouth Stove & Range Co. 10
Pullman Mfg. Co. 1
Quaker Mfg. Co. 12
Quincy Pattern Co. 52
Ralt & Co., Walter S. 14
Ramaley Co., W. H. 17
Ringen Stove Co. 20
Robinson Mfg. Co., J. M. 67
Rock Island Tool Co. 62
Safety Door Hanger Co. 1
Schoedinger, F. O. 56
Schwab, R. J. & Sons Co. 16-17
Simmons Hardware Co. 64
Smith Co., Chas. 16
Smith & Hemenway Co. 62
Sperry, D. R. Co. 53
Standard Horse Nail Co. 62
Star Enameling & Stamping Co 68
Star Expansion Bolt Co. 68
St. Louis Electrotype Fdry Co. 52
Stolz Co., Frank D. 14
Stove & Range Co. of Pittsburgh 2
Stuber & Kuck 68
Sullivan-Geiger Co. 68
Sycamore Wagon Works 62
Sykes Steel Roofing Co. 55
Tanner & Co. 54
Thurnauer, Otto 65
Turner Brass Works 60
Uno Ventilator Co 61
U. S. Stove Repair Co. 52
Vedder Pattern Works 52
Walworth Run Foundry Co. 8
Ward-Dickey Steel Co. 68
Warren, J. D 51
Weiss, H. & Co. 60
Weller Pattern Co. 52
Wheeling Corrugating Co. 54
Whitacre, J. E. Mfg. Co. 68
White Lily Mfg. Co. 62
Wise Furnace Co. 18
Youngstown Furnace & Supply Co. 17
Zucker & Levett & Loeb 15

CLASSIFIED LIST.

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Ideal Epworth Acetylene Co., Waterloo, Iowa and Johnstown, Penna

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Iwan Bros., Streator, Ill

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Columbus Bolt Wks., Columbus, O
Star Expansion Bolt Co., New York, N.Y

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Hussey & Co., C. G., Pittsburg, Pa

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Stuber & Kuck, Peoria, Ill

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Lawson Mfg. Co., Chicago, Ill
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Pullman Mfg. Co., Rochester, N. Y

Carriage Forgings

Columbus Bolt Works, Columbus, O

Ceilings

Berger Mfg. Co., Canton, O
Burton, W. J. Co., Detroit, Mich
Canton Art Metal Co., Canton, O
Canton Mfg. Co., Canton, O
Eller Mfg. Co., Canton, O
Foster & Sons Co., Wm., Springfield, Ill
Friedley-Voshardt Co., Chicago, Ill
Keighley Met. Ceiling Co., Pittsburg, Pa
Milwaukee Corrugating Co., Milwaukee, Wis
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Wheeling Corrugating Co., Wheeling, W. Va

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Cement—Roofing

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Iwan Bros., Streator, Ill

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Canton Art Metal Co., Canton, O
Canton Mfg. Co., Canton, O
Clark, Quien & Morse, Peoria, Ill
Delphos Mfg. Co., Delphos, Ohio
Eller Mfg. Co., Canton, O
Friedley & Voshardt, Chicago, Ill
La Crosse Steel Roof. Co., La Crosse, Wis
Schoedinger, F. O., Columbus, O

Copper and Brass

Hungerford, U. T., Brass & Copper Co., New York, N. Y
Hussey & Co., C. G., Pittsburg, Pa

Core Compound

Obermayer Co., S., Cincinnati, O

Corn Cribs

Denning Wire & Fence Co., Cedar Rapids, Ia

Cornices

Berger Mfg. Co. Canton, O
Canton Art Metal Co., Canton, O
Canton Mfg. Co., Canton, O
Eller Mfg. Co. Canton, O
Schoedinger, F. O., Columbus, O

Cornice Brakes

Bertsch & Co., Cambridge City, Ind
Dries & Krump Mfg. Co., Chicago, Ill
Niagara Machine & Tool Wks., Buffalo, N. Y.
Robinson, Mfg. Co., J. M., Cincinnati, O

Couplings—Solderless

Modern Improvements Mfg. Co. Brooklyn, N. Y.

Crimping Machines

Robinson, Mfg. Co., J. M., Cincinnati, O

Cutlery

Droescher, S. R., New York, N. Y
Simmons Hdw. Co., St. Louis, Mo
Smith & Hemingway Co., New York, N.Y

Cut Offs—Rain Water

LaCrosse Steel Roof. Co., La Crosse, Wis.
Milwaukee Corrugating Co., Milwaukee, Wis
Sullivan-Geiger Co., The Indianapolis, Ind.

Dampers

Howes Co., S. M. Boston, Mass

Door Hangers

Griffin Mfg. Co., Erie, Pa
Safety Door Hanger Co., Ashland, O

Eaves Trough

Canton Art Metal Co., Canton, O
Canton Mfg. Co., Canton, O
Delphos Mfg. Co. Delphos, Ohio
Eller Mfg. Co., Canton, O
La Crosse Steel Roof Co., La Crosse, Wis
Milwaukee Corrugating Co., Milwaukee, Wis
Schoedinger, F. O., Columbus, O
Whitacre, J. E. Mfg. Co., Rockford, Ill
Wheeling Corrugating Co., Wheeling, W. Va

Eaves Trough Hangers

Canton Mfg. Co., Canton, Ohio

Elbows—Conductor Pipe

Canton Art Metal Co., Canton, O
Canton Mfg. Co., Canton, O
Dieckmann, Ferdinand. Cincinnati, O.
Eller Mfg. Co., Canton, O
Milwaukee Corrugating Co., Milwaukee, Wis.
Wheeling Corrugat'g Co., Wheeling, W. Va

Electro Plating Outfits

Zucker & Levett & Loeb Co., New York

Electrotypes

St. Louis Electrotype Fdry. Co., St. Louis, Mo

Elevators

Kimball Bros. Co., Council Bluffs, Ia.

Enamel Formulas

Pell, John, Columbus, O

Enameled Ware

Lalance & Grosjean Mfg. Co., Chicago, Ill
Star Enameling & Stamping Co., Pittsburgh, Pa

Fencing—Wire

American Steel & Wire Co., Chicago, Ill
Denning Wire & Fence Co., Cedar Rapids, Ia
Pittsburgh Steel Co., Pittsburgh, Pa

Files

Carver File Wks, Philadelphia, Pa
Disston, Henry & Sons, Philadelphia, Pa

Fixtures—Store

Warren Mfg. Co., J. Chicago, Ill

Flat Irons—Alcohol

Thurnauer, Otto, New York, N. Y

Food Choppers

Enterprise Mfg. Co. of Pa. Philadelphia, Pa.

Forming Rolls

Bertsch & Co., Cambridge City, Ind
Niagara Machine & Tool Works, Buffalo, N. Y

Foundry Supplies

Obermayer, S. Co., Cincinnati, O

Furnace Cement

Connors Paint Mfg. Co., Wm., St. Louis, Mo

Furnace Rings

Walworth Run Fdy. Co., Cleveland, O

Furnaces - Gas

Ramaley Co., W. H., Pittsburg, Pa

Furnaces—Hot Air

Boynton Furnace Co., Chicago, Ill
Floyd-Wells Co., The, Chicago, Ill and Royersford, Pa
Forest City Fdy Co. Cleveland, O
Fox Furnace Co., Elyria, Ohio
Green Fdy. & Furn. Wks., Des Moines, Ia
Haynes-Langenberg Mfg. Co., St. Louis, Mo
Henry & Scheible Co., Cleveland, O
Kelsey Heating Co., Syracuse, N. Y
Magee Furnace Co., Chicago, Ill
March-Brownback Stove Co., Pottstown, Pa
Monroe Fdy. & Furn. Co., Monroe, Mich
Mueller, L. J. Furn. Co., Milwaukee, Wis
Portsmouth Stove & Range Co., Portsmouth, Ohio
Quaker Mfg. Co., Chicago, Ill
Ramaley Co., W. H., Pittsburg, Pa
Ralt & Co., Walter S. Chicago, Ill
Schwab, R. J. & Sons Co., Milwaukee, Wis
Smith Co., Chas., Chicago, Ill
Stove & Range Co of Pittsburgh, Pittsburgh, Pa
Wise Furnace Co., Akron, O
Youngstown Furn. & Supply Co., Youngstown, O

Furnaces—Soldering

Clayton & Lambert Mfg. Co., Detroit, Mich
Turner Brass Works, Sycamore, Ill

Furnace Pipe and Fittings

Green Fdy. & Furn. Wks., Des Moines, Ia
Meyer Bros. Co., F. Peoria, Ill
Michigan Safety Furnace Pipe Co., Detroit, Mich

Gas Stoves

Ringen Stove Co., St. Louis, Mo
Stove & Range Co. of Pittsburgh, Pittsburgh, Pa

Generators—Acetylene

Ideal Epworth Acetylene Co., Waterloo, Iowa, & Johnstown, Penn

Hangers—Garment

Pullman Mfg. Co., Rochester, N.Y

Hardware Delivery Wagons

Sycamore Wagon Works, Sycamore, Ill

Hardware Jobbers

Clark, Quien & Morse, Peoria, Ill
Paxton & Gallagher Co., Omaha, Neb
Simmons Hardware Co., St. Louis Mo

Hardware Specialties

Butler Bros., Chicago, Ill
Enterprise Mfg. Co. of Pa., Philadelphia, Pa
Paxton & Gallagher Co., Omaha, Neb
Pullman Mfg. Co, Rochester, N. Y
Smith & Hemenway Co., New York, N. Y

Heaters—Hot Water

Detroit Heating & Lighting Co., Detroit, Mich

Hinges

Griffin Mfg. Co., Erie, Pa
Lawson Mfg. Co., Chicago, Ill

Hods—Coal

Simmons Hardware Co., St. Louis, Mo

Hollow Ware

Avery Stamping Co., Cleveland, O
Sperry, D. R. & Co., Batavia, Ill

Hones

Droescher, S. R., New York, N. Y

Horse Nails

Standard Horse Nail Co., New Brighton, Penna

Horse Shoes

American Steel & Wire Co., Chicago Ill

Ice Cream Freezers

North Bros. Mfg. Co., Philadelphia, Pa

Iron Enamel

A-B Polish Co., Chicago, Ill
Nickel Plate Stove Polish Co., Chicago, Ill

Kitchen Utensils

Avery Stamping Co. Cleveland, O
Lalance & Grosjean Mfg. Co., Chicago, Ill
Star Enameling and Stamping Co., Pittsburgh, Pa
Thurnauer, Otto, New York, N. Y

Lamps

Cohn & Co., G., New York, N. Y
Thurnauer, Otto, New York, N. Y

Lard Presses

Enterprise Mfg. Co. of Pa. Philadelphia, Pa

Lawn Fence

Denning Wire & Fence Co., Cedar Rapids, Ia

Levels

Baker-McMillen Co., Akron, O

Lighting

Ideal Epworth Acetylene Co. Waterloo, Iowa and Johnstown, Penna

Lighting Systems

Detroit Heating & Lighting Co., Detroit, Mich

Lightning Rod

Electra Lightning Rod Co. Cresco, Ia
Foy, Edw. A. & Co., Cincinnati, O
Maher & Son Lightning Rod Co., Preston, Ia

Mantles—Alcohol

Cohn & Co., G., New York, N. Y
Thurnauer, Otto, New York, N. Y

Metal—Perforated

Harrington & King Perforating Co., Chicago, Ill

Metal Polish

A-B Polish Co., Chicago, Ill
Nickle Plate Stove Polish Co., Chicago, Ill

Metal Shingles

Burton, W. J. Co., Detroit, Mich
Canton Art Metal Co., Canton, O
Contright Metal Roofing Co., Philadelphia and Chicago
Nat'l Sheet Metal Roofing Co., Jersey City, N. J

Mica

Munsell & Co., Eugene Chicago, Ill

Miters

Whitacre, J. E. Mfg. Co., Rockford, Ill

Nails and Tacks—Copper

Hungerford, U. T., Brass & Copper Co., New York, N. Y
Hussey & Co., C. G., Pittsburg, Pa

Nickel Plating Outfits

Zucker & Levett & Loeb, New York, N.Y

Nuts

Columbus Bolt Works, Columbus, O

Paints and Paint Specialties

Buckeye Paint & Varn Co., Toledo, O
Connors, Wm., Paint Mfg. Co., Troy, N. Y
Dixon, Jos. Crucible Co., Jersey City, N.J

Pencils

Dixon, Jos. Crucible Co., Jersey City N.J

Perforated Metal

Harrington & King Perforating Co., Chicago, Ill

Pipe—Furnace

Meyer & Bro., Co., F. Peoria, Ill
Michigan Safety Furnace Pipe Co., The Detroit, Mich

Plungers

Berger Bros. Co., Philadelphia Pa

Punches

Armstrong-Blum Mfg. Co., Chicago, Ill
Bertsch & Co., Cambridge City, Ind
Niagara Machine & Tool Works., Buffalo, N.Y
Robinson, Mfg. Co., J. M., Cincinnati, O

Putty—Stove

Connors, Wm. Paint Mfg. Co., Troy, N.Y

Rasps

Droescher, S. R., New York, N. Y
Disston, Henry & Sons., Philadelphia, Pa
Carver File Wks., Philadelphia, Pa

Razors

Droescher, S. R., New York, N. Y
Smith & Hemenway Co., New York, N.Y

Registers

Ferrosteel Co., Cleveland, O
Henry & Scheible Co., Cleveland, O
Schwab & Sons Co., Milwaukee, Wis
Walworth Run Fdy. Co., Cleveland, O

Rivets

Columbus Bolt Works, Columbus, O
Hungerford, U.T., Brass & Copper Co., New York, N. Y

Roasters

Wheeling Corrugating Co., Wheeling, W. Va

Roofers' Supplies

Auld & Conger Co., Cleveland, O

Roofing—Iron and Steel

American Rolling Mill Co., Middletown, O
American Sheet & Tin Plate Co. Pittsburgh, Pa
Berger Mfg. Co., Canton, O
Burton, W. J. Co., Detroit, Mich
Canton Art Metal Co., Canton, O
Canton Mfg. Co., Canton, O
Delphos Mfg. Co., Delphos, Ohio
Eller Mfg. Co., Canton, O
Follansbee Bros. Co., Pittsburgh, Pa
Friedley & Voshardt, Chicago, Ill
La Crosse Steel Roof. Co., La Crosse, Wis
Nat'l Sheet Metal Roof. Co., Jersey City, N. J
Schoedinger, F. O., Columbus
Sykes Steel Roofing Co., Chicago, Ill
Tanner & Co. Indianapolis, Ind
Wheeling Corrugating Co., Wheeling, W. Va

Roofing Cement

Auld & Conger Co., Cleveland, O
Connors Paint Co., The Wm., Troy, N.Y

Roof Paint

Dixon, Jos. Crucible Co., Jersey City, N.J

Rules

Lufkin Rule Co., Saginaw, Mich

Sash Balances

Pullman Mfg. Co., Rochester, N.Y

Sausage Stuffers

Enterprise Mfg. Co. of Pa. Philadelphia, Pa

Saw Sets and Saws

Disston, Henry & Sons, Philadelphia, Pa
Smith & Hemenway Co., New York, N.Y

Schools—For Sheet Metal Pattern Drafting

Gray's School, New York, N. Y

Screens—Perforated Metal

Harrington & King Perforating Co., Chicago, Ill

Screen Door Checks

Pullman Mfg. Co., Rochester, N. Y

Screws

Columbus Bolt Works, Columbus, O

Screw Drivers

North Bros. Mfg. Co., Philadelphia, Pa

Seamless Tubing—Brass & Copper

Hungerford, U. T., Brass & Copper Co., New York, N. Y

Shears

Bertsch & Co., Cambridge City, Ind
Niagara Machine & Tool Works, Buffalo, N. Y
Robinson, Mfg Co., J. M., Cincinnati, O
Simmons Hdw. Co., St. Louis, Mo

Sheets—Black and Galvanized

American Rolling Mill Co. Middleton, Ohio
American Sheet & Tin Plate Co. Pittsburgh, Pa
Berger Mfg. Co., Canton, O
Tanner & Co., Indianapolis, Ind
Wheeling Corrugat'g Co., Wheeling, W.Va

Sheets—Ingot Iron

American Rolling Mill Co. Middleton, Ohio

Sheets—Planished

American Sheet & Tin Plate Co., Pittsburgh, Pa
Follansbee Bros., Pittsburg, Pa
Ward-Dickey Steel Co., Indiana Harbor, Ind

Sheets—Steel

American Sheet & Tin Plate Co., Pittsburgh, Pa
American Steel & Wire Co., Chicago, Ill
Follansbee Bros. Co. Pittsburgh, Pa
Sykes Steel Roofing Co., Chicago, Ill
Tanner & Co., Indianapolis, Ind

Sheet Metal Ornaments

Berger Mfg. Co., Canton, O
Foster, & Sons Co., Wm. Springfield, Ill
Friedley-Voshardt Co., Chicago, Ill
Gerock Bros. Mfg. Co., St. Louis, Mo
Kelhley Metal Ceiling Co., Pittsburg, Pa
La Crosse Steel Roofing and Corrugating Co., La Crosse, Wis
Milwaukee Corrugating Co., Milwaukee, Wis
Schoedinger, F. O., Columbus, O

Shelf Boxes

Green & Co., A. H., New York, N. Y

Shelving

Warren Mfg. Co., J. D., Chicago, Ill

Shovels

Avery Stamping Co., Cleveland, O

Siding

Foster, Wm. & Sons Co., Springfield, Ill
Milwaukee Corrugating Co., Milwaukee, Wis

Sifters

Stuber & Kuck, Peoria, Il

Skylights

Berger Mfg. Co., Canton, O
Burt Mfg. Co., Akron, O
Canton Art Metal Co., Canton, O
Eller Mfg. Co Canton, O
Sykes Steel Roofing Co., Chicago, Ill

Skylight Gearing

Sykes Steel Roofing Co., Chicago, Ill
Weiss, H. & Co., New York, N. Y

Slate Roofing

Auld & Conger Co., Cleveland, O

Slating Nails

Hussey & Co., C. G., Pittsburg, Pa

Squares, Machinists'

Disston, Henry & Sons, Philadelphia, Pa

Stampings—Sheet Metal

Avery Stamping Co., Cleveland, O

Statuary

Gerock Bros. Mfg. Co., St. Louis, Mo

Steel

American Steel & Wire Co., Chicago, Ill

Stoves and Ranges

Allen Mfg. Co., Nashville, Tenn
Chicago Stove Works, Chicago, Ill
Cole Mfg. Co., Chicago, Ill
Floyd-Wells Co., The Chicago, Ill. & Royersford, Pa
Foster Stove Co., The, Ironton O
Fox Furnace Co., Elyria Ohio
Landay Steel Range Co., St. Louis, Mo
Monitor Stove & Range Co., Cincinnati, O
Ohio Stove Co., Portsmouth, O
Paxton & Gallagher, Omaha, Neb
Portsmouth Stove & Range Co. Portsmouth O
Ringen Stove Co., St. Louis, Mo.
Stove & Range Co. of Pittsburgh, Pittsburgh, Pa.

Stoves—Alcohol

Cohn & Co., G. New York, N. Y
Thurnauer, Otto, New York, N. Y

Stove Mats

Stuber & Kuck, Peoria, Ill

Stove Patterns

Cleveland Castings Pattern Co., Cleveland, O
Cope Pattern, Geo. W. Wks., Detroit, Mich
Quincy Pattern Co., Quincy, Ill
Vedder Pattern Works, Troy, N. Y
Weller Pattern Co. Quincy, Ill

Stove Pipe

Hemp & Co., St. Louis, Mo

Stove Pipe Thimbles

Stuber & Kuck, Peoria, Ill

Stove Polish

A-B Polish Co., Chicago, Ill
Nickel Plate Stove Polish Co., Chicago, Ill

Stove Putty

Connors Paint Mfg. Co., Wm., St. Louis, Mo
Dixon, Jos. Crucible Co., Jersey City, N. J.

Stove Repairs

American Stove Repair Works, St. Paul, Minn
Brauer, A. G., Supply Co., St. Louis, Mo
Manufacturers Stove Repair Co., Chicago, Ill
Northwestern Stove Repair Co. Chicago, Ill
U. S. Stove Repair Co., Minneapolis, Minn

Sugar Kettles

Sperry, D. R. Co., Batavia, Ill

Supplies—Foundry

Obermayer Co., S., Cincinnati, O

Supplies—Stove Dealers'

Brauer, A. G., Supply Co., St. Louis, Mo

Tacks

Hungerford, U. T., Brass & Copper Wks New York, N. Y

Tapes

Lufkin Rule Co., Saginaw, Mich

Technologist

Hooper, C. H. Dubuque, Iowa

Thermometers—Oven

Evans Stamping & Plating Co., Taunton, Mass

Tin—Perforated

Harrington & King Perforating Co., Chicago, Ill

Tinners' Furnaces

Clayton & Lambert Mfg. Co., Detroit, Mich
Turner Brass Works, Sycamore, Ill

Tinners' Tools

Armstrong, Blum Mfg. Co., Chicago, Ill
Auld & Conger Co., Cleveland, O
Berger Bros. Co., Philadelphia, Pa
Bertsch & Co., Cambridge, Mass
Dries & Krump Mfg. Co., Chicago, Ill
Lufkin Rule Co., Saginaw, Mich
Niagara Machine & Tool Works, Buffalo, N. Y
Robinson Mfg. Co., J. M., Cincinnati, O
Smith & Hemenway Co., New York N.Y
Weiss & Co., H., New York, N. Y

Tinplate

American Sheet & Tin Plate Co., Pittsburg, Pa
Eller Mfg. Co. Canton, O
Follansbee Bros. Co., Pittsburgh, Pa
Merchant & Evans Co., Philadelphia, Pa
Tanner & Co. Indianapolis, Ind
Wheeling Corrugating Co., Wheeling, W. Va

Tinware Trimmings

Berger Bros. Co., Philadelphia, Pa
Butler Bros., Chicago, Ill

Tools, Etc.

North Bros. Mfg. Co., Philadelphia, Pa
Rock Island Tool Co., Rock Island, Ill

Tools—See Carpenters' Tools

Tools—Linemen's

Smith & Hemenway, New York, N.Y

Trowels

Avery Stamping Co., Cleveland, O
Disston, H. & Sons, Inc., Philadelphia, Pa
Griffin Mfg. Co., Erie, Pa

Tubing—Brass and Copper

Hungerford, U. T., Brass & Copper Co. New York, N. Y

Tubing—Heavy Tin

Dieckmann, Ferdinand, Cincinnati, O

Ventilators

Berger Mfg. Co., Canton, Ohio
Burt Mfg. Co., Akron, Ohio
Canton Art Metal Co., Canton, O
Canton Mfg. Co., Canton, O
Eller Mfg. Co., Canton, O
Friedley & Voshardt, Chicago, Ill
Globe Ventilator Co., Troy, N.Y
Iwan Mfg. Co., Streator Il
Merchant & Evans Co., Philadelphia, Pa
Pullman Mfg. Co., Rochester, N. Y
Uno Ventilator Co., Lynn, Mass

Vises—Automatic Swivel

Rock Island Tool Co., Rock Island, Ill

Wagons

Sycamore Wagon Wks., Sycamore, Ill

Washers

Columbus Bolt Works., Columbus, O

Washing Machines

White Lily Mfg. Co., Davenport, Ia

Wire

American Steel & Wire Co., Chicago, Ill

Wire Goods

Denning Wire & Fence Co., Cedar Rapids, Ia
Pittsburgh Steel Co., Pittsburgh, Pa

Wants and Sales

For Paid Yearly subscribers THE AMERICAN ARTISAN will insert under this head advertisements of six lines WITHOUT CHARGE for employers wishing to secure employes, persons seeking situations, parties desiring to purchase a business, businesses for sale, partners wanted, to exchange, etc. Those who respond to these announcements will please mention that they "READ THE ADVERTISEMENT IN THE AMERICAN ARTISAN."

BUSINESS CHANCES.

PATENTS HUBERT E. PECK 623 F. Street, N. W. Washington, D. C. Consulting Expert in Patent Causes. U. S. and Foreign Patents. Send for leaflet on "Rejected Patent Applications."

For Sale—Cash. $5,000 hardware stock and good fixtures, with tinshop. Yearly sales, $18,000; profit, $4,000. Good town in south central Minnesota. Must sell on account of health. Address Box 198, Sherburn, Minnesota. 10-3t

For Sale—Hardware store including tinshop, located in village in eastern Wisconsin with good business. Good building. Fine surrounding country. For particulars address L-16, care of THE AMERICAN ARTISAN, 355 Dearborn St., Chicago. 9-2t

For Sale—Half interest in hardware and furniture business located in good town in central western Minnesota. Party must be well recommended and capable of managing the business. Address L-11, care of THE AMERICAN ARTISAN, 355 Dearborn St., Chicago. 8-3t

For Sale—$4,500 stock of hardware with tinshop. County seat in Wisconsin. Location fine; within rich farming and dairy country. Competition good and business not overdone. No old stock and can be bought right. Just the place for a hustling party. Don't turn this down without your investigation. Address L-13, care of THE AMERICAN ARTISAN, 355 Dearborn St., Chicago. 8-3t

TINNER'S TOOLS.

Wanted to Buy—Good second hand eight-foot cornice brake, if it can be bought at a bargain. Address C. J. Johnson, Dell Rapids, South Dakota. 10-3t

HELP WANTED.

Wanted—At once, first-class plumber and furnace man. Good wages and permanent position. Address A. C. Snyder, York, Nebraska. 10-2t

Wanted—Good all around tinner and plumber. One who understands heating, etc. Steady job for the right kind of man. Address Iowa Hardware Co., Vinton, Iowa. 10-3t

Wanted—All around tinner and plumber for country shop. One who can repair pumps and help in store when needed. Steady job year around. No boozer need apply. Address William Wilker, Wyoming, Iowa. 10-3t

Wanted—All around tinner and furnace man, who also understands plumbing. Must be sober and reliable. Wages, $2.50 per day. Application must be accompanied with references. Address Kewaunee Hardware Co., Kewaunee, Wisconsin. 10-3t

Wanted—Two tinners and furnace men at once. Address McGuire Bros., Rockford, Illinois. 10-3t

Wanted at Once—First-class tinner and furnace man, with some experience in plumbing preferred. Must be sober and reliable. When writing state wages and give references. Address J. H. Ford, Dodgeville, Wisconsin. 10-3t

Wanted—First-class tinner. One used to cornice work preferred. Union shop. Address Smith & Stewart, 5626 South boulevard (Austin Sta.), Chicago, Illinois. 10-1t

Tinner and Clerk Wanted—Strictly reliable and honest. Steady work all year around. State wages, experience and give references. Address L-14, care of THE AMERICAN ARTISAN, 355 Dearborn St., Chicago. 9-3t

Wanted—About Sept. 1, first-class plumber and hot water heating man. State wages and experience. Address Ellis Wolfe, Kinmundy, Illinois. 9-3t

Wanted—All around tinner and plumber; one who understands his business. Married man preferred. No boose fighter need apply. For particulars write R. A. Richards, Au Sable, Michigan. 9-3t

Tinner Wanted—All around man for furnace work, gutters, tin decks and general job work, etc. Must be good workman. Good shop and tools. $2.50 per day. 9 hours' work. Steady work year around. Address White Plumbing and Heating Co., Charleston, Illinois. 9-3t

Wanted—All around tinner, pump and windmill man. Good practical man and willing to work in store if needed. Must be temperate. Fine opening for the right man. Good wages. Permanent position. Address L-19, care of THE AMERICAN ARTISAN, 355 Dearborn St., Chicago. 9-3t

Wanted—All around tinner and furnace man. Mostly all indoor work. Good, steady, sober man. Steady work the year around for the right man. Address 713 Water St., Sandusky, Ohio. 9-3t

Wanted—All around tinner and plumber for country shop. Steady and reliable. State particulars in letter. Also a helper and stove man. Address Boyd Brothers, Glen Ellyn, Illinois. 9-3t

Wanted at Once—Good all around tinner and furnace man. Steady work. Address Macomb Sheet Metal Works, Macomb, Ill. 8-3t

Wanted—An all around hardware clerk. One who has had some office experience preferred. State wages and experience. References required. Address J. C. Zinser, Hardware Co., Joliet, Ill. 8-3t

SITUATIONS WANTED.

Situation Wanted—Retail hardware merchant would like position to call on retail trade in northwest territory with line of samples. Address L-20, care of THE AMERICAN ARTISAN, 355 Dearborn St., Chicago. 10-3t

Situation Wanted—By first-class tinner as hot air furnace man and general job worker. Strictly sober and competent. Address L-17, care of THE AMERICAN ARTISAN, 355 Dearborn St., Chicago. 9-2t

Situation Wanted—As tinner and clerk in good Iowa town of 1,000 inhabitants or less in central or southern Iowa. Fifteen years' experience. Can install hot air furnaces also do ordinary plumbing work, etc. Best references furnished. No high climbing. Address G. N., Grundy Center, Iowa, care Hotel Columbia. 9-3t

Situation Wanted—By up-to-date tinner and furnace workman. Neat and quick, pleasant to customers. Steady job wanted in country town in Illinois. State wages. Address Ira Gray, Monticello, Indiana, Box 317. 9-3t

Situation Wanted—By first-class man, 25 years of age, with nine years' experience in retail hardware business. A-1 tinner and furnace man, also understands plumbing. West or Southwest preferred. Nothing but steady job considered. Can go to work at once. Address Lock Box 153, Greenfield, Iowa. 9-3t

Wanted—Steady position by sober and reliable tinner and plumber, also understands heating in all its branches. Am strictly first-class man. The Northwest preferred. Address L-18, care of THE AMERICAN ARTISAN, 355 Dearborn St., Chicago. 9-3t

Situation Wanted—By first-class tinner. Twenty years' experience. Can do in and outside work, also plumbing and clerking. Sober and steady. Address Tinner, 1033 Livingstone Av., St. Paul, Minn. 8-3t

Situation Wanted—In southern Minnesota or northern Iowa, by man of twelve years' experience at the bench and in store. Address A. L. Canfield, Luverne, Minn. 8-3t

SPECIAL NOTICES.

Agents Wanted

For selling Patent Automatic Smoke Preventer; also Grease Separators in Southern and Western States. Address The Baldwin Engineering Co., 209 W. Thirty-third St., New York, N. Y. 10-1t

Traveling Salesmen Wanted

For a large Stove, Range and Hollow-ware Manufacturing business to cover the territory of Arkansas, part of Missouri and Oklahoma. Address B-14, care of THE AMERICAN ARTISAN, 355 Dearborn St., Chicago. 10-3t

WANTED

Hardware stock in exchange for good improved farm. Give amount of stock and full particulars in first letter. Address B-13, care of THE AMERICAN ARTISAN, 355 Dearborn St., Chicago. 9-2t

SITUATION WANTED

By experienced hardware salesman. Either salary or commission. Well acquainted in Minnesota and Dakota. Address B-12, care of THE AMERICAN ARTISAN, 355 Dearborn St., Chicago. 9-6t

THREE FIRST-CLASS CORNICE MAKERS

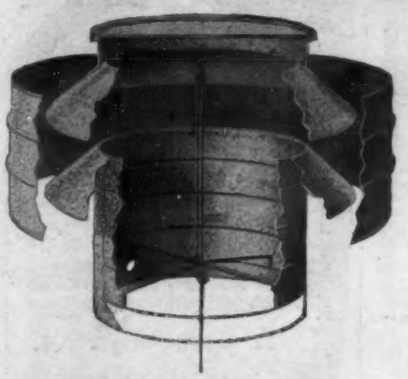
Wanted at 55 cents per hour. Open shop. Steady work. Address The Western Heating and Sheet Metal Works, Salt Lake City, Utah. ufn

Factory For Sale

Stove factory, with complete modern equipment, manufacturing oil heating, oil cooking, gasoline, alcohol and lamp stoves, ovens and steel ranges. Well assorted manufactured stock. Also material raw and in process, cash account, unfilled orders, patterns and patents. Business has been operated continuously and has well established trade. Building new; cement and steel construction. Full sprinkled. Property comprises iron foundry, brass foundry, japan and nickel plating departments, press department, machine shop, model power and heating plant, fine office, ample storage, machinery and all equipment, new and first class. Sale by public auction to highest bidder September 18, 1908, at Ann Arbor, Michigan. Inventory can be inspected after September 1 at the office of Register of Circuit Court, Ann Arbor, Michigan, or office of Detroit Trust Company, Receiver Glazier Stove Co., Chelsea, Michigan. 7-5t

WANTED:

By a large manufacturing concern, located in the middle west, a man who has had experience and is fully capable of taking entire charge of a steel ceiling and stamping department. Must have full knowledge of all matters connected with the cataloging, selling and stamping of ceilings. State fully your experiences and with whom you are now employed. Give full information as to any particular lines on which you are equipped. All applications will be considered strictly confidential. Address B-11, care of THE AMERICAN ARTISAN, 355 Dearborn St., Chicago. 9-4t



Notice Sliding Sleeve Damper. Patented.

Good Evidence

The following letter is received from a "Burt" user who at three different times has come back for more "Burts" for use in his factory:

June 12, 1908, Knoxville, Tenn.

Gentlemen:—We have your letter of the 10th inst. with reference to the 8-30" Glass Top and 6-48" Metal Top Burt Ventilators sold us, and beg to advise that we are finding these ventilators satisfactory.

Yours truly,
THE WM. J. OLIVER MFG. CO.

Burt Ventilators

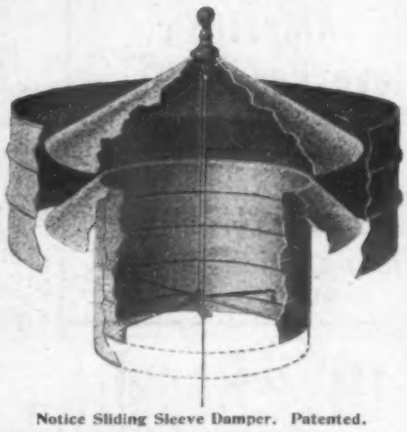
always prove their worth and their superiority wherever they are installed. The Burt construction is unusually thorough from the selection of the raw material down through the finishing of the last rivet.

The features of Burt Ventilators are unusual. They have patented adjustable sliding sleeve damper. They are storm and dust proof whether open or closed. They can be opened to any degree by a simple pull of the adjusting cord and are made with glass tops, thus making a combination skylight and ventilator.

Send for our new 92-page catalog giving fine illustrations of mills, shops, factories, and residences where Burt Ventilators are in successful use.

The Burt Mfg. Company, 650 Main St., Akron, O.

Largest manufacturers of Oil Filters and Exhaust Heads in the world.
Geo. W. Reed & Co., Montreal, Sole Manufacturers of "Burt" Ventilators for Canada.



Notice Sliding Sleeve Damper. Patented.

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Metal patterns complete for high grade STEEL RANGE (three bodies) for sale at bargain. Address "Dexter," care of THE AMERICAN ARTISAN, 355 Dearborn St., Chicago. 10-12-14-16

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It is made of a very high grade of uniform color Blue Polished Steel, and is coated to prevent rusting. Made in all sizes. Packed twenty-five and fifty joints to crate. For sale by the jobbing Hardware Trade throughout the United States. Mfg. by

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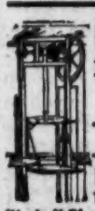

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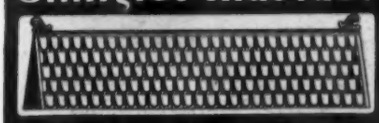
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The Ideal Epworth Acetylene Generators
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Made from **SPECIAL BLUED SMOOTH STEEL.**

Wire Detachable Hinge and Wire Locking Device.

Superior in Material and Workmanship. **HIGH GRADE UNIFORM QUALITY.**

Made with Four Raised Points or Feet, which raise the Pan from the Oven Floor, leaving Space for Circulation of Air, **PREVENTS BURNING.**

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Dripping Rack for Bottom Pan.

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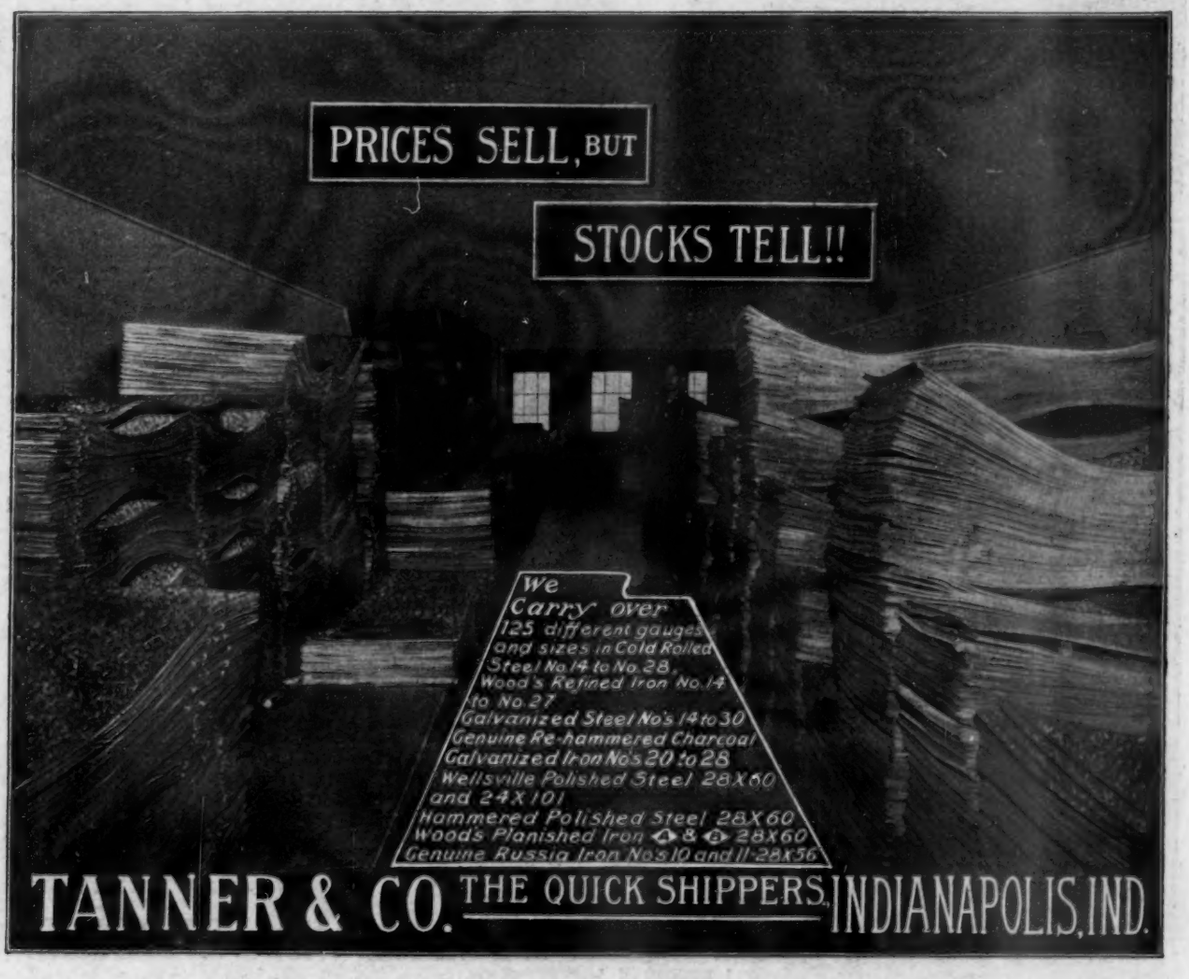

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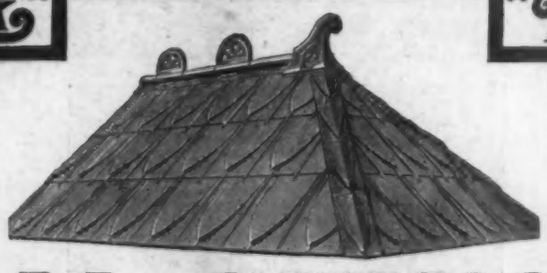
"TITELOCK" TRADE MARK

See the crimps or narrow
corrugations formed
lengthwise of the
plates, which
mean RIGIDITY
and STRENGTH.



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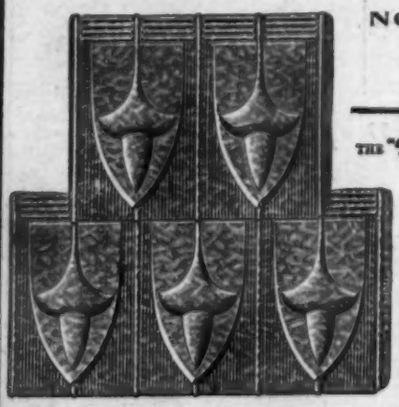

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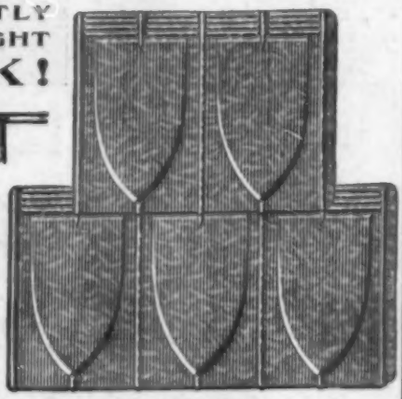
THE SIDE-LOCK is so formed that the matching beads are absolutely straight and true to size. The outer flange is pressed to such an angle that after it is inserted in the recess of the adjoining shingle the act of laying the shingle springs it into a *perfectly tight* contact at both the top and bottom with the beads positively nested.



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SOLE MANUFACTURERS
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METAL CEILINGS AND SIDE WALLS

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Specify With

GUARANTEE *F. Dieckmann* Stamped in the Metal.

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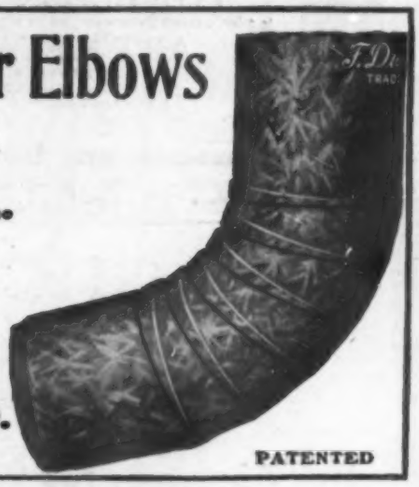

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ART METAL CEILINGS
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Perfect Joints

Absolutely Dust-Proof

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Will bend cold material up to 1 by ⅜ inches; rounds and squares up to ⅝ inch. On hot work up to 3 by ¾.

Sold under positive guarantee to do satisfactory work.
Manufactured by
THE COMMERCIAL MFG. CO.
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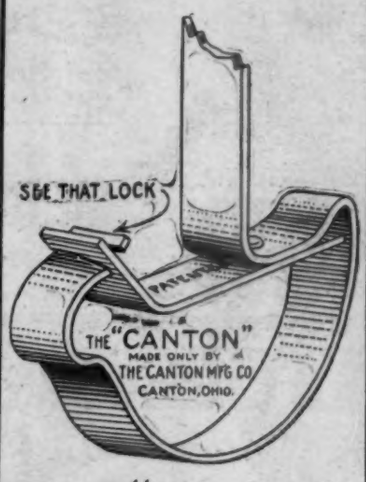

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is the strongest and most economical Eave Trough Hanger on the market.
Ask for Prices.
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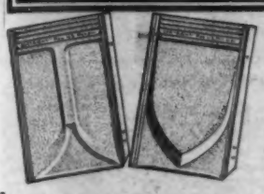
Manufacturers of Cornice, Skylights, Ventilators, Metal Ceilings, etc.

CORTRIGHT



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DELPHOS B. B. GALVANIZED SHEETS

Absolutely Perfect.

DELPHOS Corrugated, Pressed Standing Seam, V Crimp, Three V Crimp, Roll, and Roll & Cap Galvanized Roofings.

All Roll Roofings Resquared and Double Cross Locked.

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SOLDER—Faultless, B. T. & L. and Standard Brands.

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Sheet Metal Ornaments and Statuary

Detail Work a Specialty

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—OF—
Sheet Metal Pattern Drafting

Can you lay out any pattern?
If not, write for
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Every study in this course is solid study on the development of patterns as they are required to be made in a MODERN CORNICE OR SHEET METAL WORKS.

Having adopted the easiest and shortest methods of developing patterns, and selected the problems that come up in every day work from the easiest to the hardest.

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NOW IS THE TIME TO START THIS COURSE!

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Jobbers supply at factory price, or we will ship direct if cash accompanies the order.

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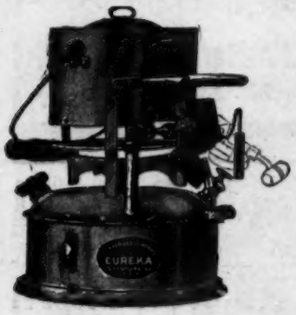

Let us prove it.

A trial order will convince you.

No. 6 Eureka, price each, $6.00 net
No. 14 " " " 4.50 "

Jobbers sell at factory price

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Pipe Threading Machines

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For Standing Seams.
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TOOLS FOR SHEET METALS

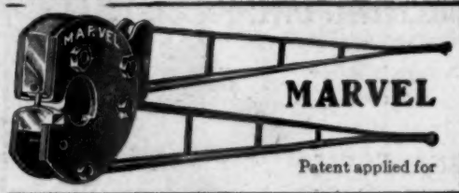
INCLUDING

Single and Double Lock Edger.

Tinners' and Roofers' Tools, Shears, Punches, Presses and Dies, Can-Making Machinery

MADE BY

NIAGARA MACHINE & TOOL WORKS, Buffalo, N. Y.



MARVEL

Patent applied for

PORTABLE PUNCH No. 20

Made entirely of STEEL

Punches ¼ in. hole in ¼ in. and equivalent

Let us send you one on trial.

Write for circular and price of this and other Marvel Punches and Shears.

ARMSTRONG-BLUM MFG. CO.,
106 N. Francisco Ave., Chicago, Ill.

C. G. Hussey & Company

PITTSBURGH, PENNA.

Manufacturers of

Soft Copper, Copper Gaskets, Copper Bottoms, Soldering Irons
Copper Nails and Tacks, Tinned Copper, Polished Copper,
Cold Rolled Copper, Special Shapes Sheared or Stamped Slating Nails.

PROMPT SHIPMENT FROM STOCK.

Two Reasons Why The Steel Brakes Are Better

Others Will Follow

1. By our patented construction we have succeeded in getting the greatest amount of strength with the minimum weight. They work much faster and easier, and do fully one-fourth more of the average work than any other brake.

2. They are made of Bessemer Steel, and all the working parts where strength is required are made of non-breakable steel castings.

You will be surprised to find out how cheap you can buy this up-to-date machine

WRITE FOR CATALOGUE.

Dreis & Krump Mfg. Co., Halsted and 32d Sts., Chicago

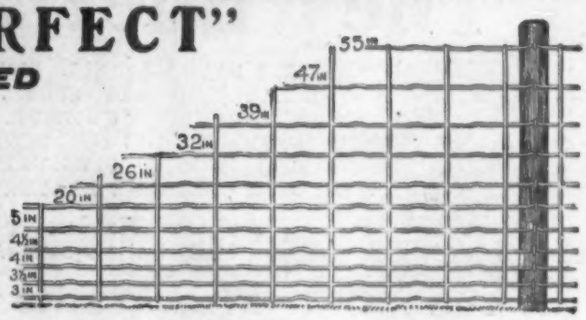
WE want agents in every state in the Union to take subscriptions for THE AMERICAN ARTISAN. Agents can devote all or part time. Subscribers can make a nice little sum each week on the side by devoting their spare time to this work. Write for agents' terms. Sample copies sent upon request. Address, THE AMERICAN ARTISAN, 355 Dearborn Street, Chicago, Ill.

THE VERY STRONGEST FENCE MADE

"PITTSBURGH PERFECT"

ELECTRICALLY WELDED

Fences



will curb in the strongest beasts. Can be adjusted to uneven ground. Are a sure cure for all fence troubles and will last longer than any other on the market. Dealers wishing to handle a line of goods which will prove ready sellers should carry the

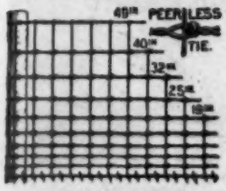
"Pittsburgh Perfect Brands"

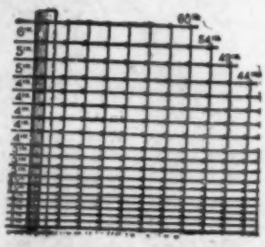
of Wire Rods, Bright Annealed and Galvanized Plain Wire, Barbed Wire Wire Nails, Fence Staples, Steel Hoops, Bands and Cotton Ties.

MANUFACTURED BY THE

Pittsburgh Steel Co., Pittsburgh, Pa.

THE DENNING FENCE





For yard and pasture has no equal. Our Peerless Cabled Fence with barb wire in the bottom turns hogs, absolutely. We beat the world on Poultry Fence. We make perfect Barb Wire. We ship mixed cars Woven Fence, Barb Wire and Nails.

Write for Catalog and Prices.

THE DENNING WIRE & FENCE CO., Cedar Rapids. Iowa.

We have the best Pure Copper Cable

Lightning Rods

and fixtures on the market, and to prove what we say is right, we are willing to send any firm a sample outfit and they can look it over, and if it is not the best they have ever seen, and not satisfactory in every way, we want the whole shipment returned at our expense and it costs them nothing. We manufacture all our own goods and know just what they are, and we want every hardware dealer to write to us for prices and territory. We give a $500.00 guarantee and also one of our improved static machines.

WRITE TODAY TO

Maher & Son Lightning Rod Co., Preston, Iowa

"ELECTRA" PURE COPPER LIGHTNING RODS AND FIXTURES

NOTHING BETTER PRICES RIGHT WRITE US

To convince you we mean what we say, let us ship you an outfit upon approval. If you don't like it, you may return it to us at our expense

ELECTRA LIGHTNING ROD CO., 220-240 Market Street, CRESCO, IOWA

Iwans' Volcano Revolving Chimney Top

Sizes 6 to 12 inches. Sold by jobbers of Hardware and Tinners' Supplies.

Notice one of its **Strong Features.** The upward sloping opening in back of hood creates a constant upward draft, no matter how depressing the atmosphere.

You need it for some of your customers' chimneys.

Send postal for catalogue.

IWAN BROTHERS

Mfrs. of Hardware Specialties

STREATOR, ILL.

LIGHTNING RODS

We manufacture Pure Copper Wire Cable Lightning Rods, made of 28, 30 and 49 Wires, with complete outfit of trimmings.

E. A. FOY & CO., Cincinnati, Ohio

Trade Supplied at Lowest Rates. Send for Catalogue "B."

Mimco Solderless Couplings

NO SOLDER (Patented) NO SOLDER

Do away entirely with wiping joints. A practical article and BIG SELLER.

Send for Descriptive Circular and Price-List.

MODERN IMPROVEMENTS MFG. CO.

466-470 17th Street • BROOKLYN, N. Y.

Uno Revolving Ventilators

A sure cure for smoky chimneys, the best for ventilation.

4" to 30"

Send for Catalogue

Uno Ventilator Co.

P. O. Box 209 LYNN, MASS.

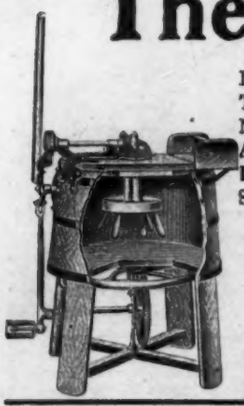
YOU

need a Tinner, Furnace Man or Hardware Clerk. A want ad in

THE AMERICAN ARTISAN

That's all that's necessary to solve the problem.

The White Washer



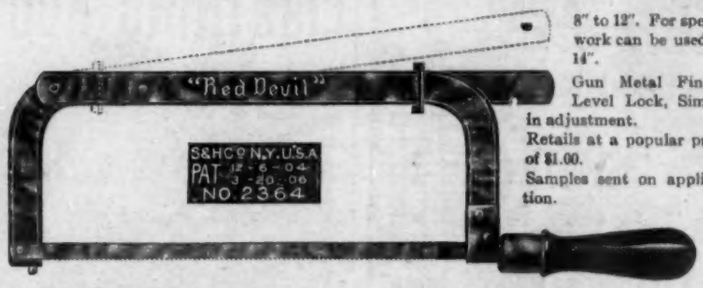
DOUBLE BALL BEARING. FLY WHEEL UNDER THE TUB. HIGHEST SPEED. EASIEST RUNNING. QUICKER REVERSE. FOOT POWER ATTACHMENT. TUB OPENS WHEN MACHINE IS IN FULL MOTION. FIVE YEARS' GUARANTEE. SOLD TO ONLY ONE DEALER IN EACH TOWN.

Ask for Exclusive Agency
and Get Acquainted With

The White Way

White Lily Manufacturing Co.
1500 Rockingham Road, - Davenport, Iowa

Genuine "RED DEVIL" Hack Saw Frame



8" to 12". For special work can be used on 14".

Gun Metal Finish, Level Lock, Simple in adjustment.

Retails at a popular price of $1.00.

Samples sent on application.

Order through your jobber or direct from us. Insist upon the Genuine "RED DEVIL."

SMITH & HEMENWAY CO., 108-110 Duane Street, New York City

FREEZERS

"LIGHTNING"

THAT EXCEL IN
Easy Running
Quick Freezing
Economy
Convenience
Practical Results

THAT ARE
Well Advertised
In Demand
Easily Sold
Satisfactory in Use
Of Known Reputation

"BLIZZARD"

THE "BEST MADE" because in practical use, they are convenient, compact in size, use smallest amount of ice and salt, run easily, freeze quickly, produce smoothly frozen creams or desserts with little bother and less work. We make also

MACHINE FREEZERS AND ICE BREAKERS

Sold by Leading Jobbers — Catalog Sent Free

NORTH BROS. MFG. CO. Philadelphia

We Have a Hardware Delivery Wagon That You Can Depend Upon

Body 20 inches from the ground, full width; regular height wheels, and yet will turn short.

EASY TO LOAD AND UNLOAD

Durability guaranteed. Complete catalogue on request. Mention this paper and address in full.

SYCAMORE WAGON WORKS, 109 EDWARDS ST., Sycamore, Ill.

NOTE ITS SIMPLICITY

Automatic Swivel Vise

Locks Automatically by Tightening the Jaws

Saves 20 per cent Vise Labor

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ROCK ISLAND TOOL CO. — ROCK ISLAND — ROCK ISLAND, ILLINOIS, U.S.A.

136 Liberty St. NEW YORK — 116 Lake St. CHICAGO

DENVER, 208 McPhee Building

HONES ARE HONES

But "APART" Hones are the Thing

For Sale by all Jobbers

S. R. DROESCHER
79 Warren St., NEW YORK, N. Y.

EVERY GALLON GUARANTEED

BUCKEYE

MIXED PAINTS

are the Paints you should handle.

Made from Pure Linseed Oil, White Lead, Oxide of Zinc and Highest Grade Coloring Material.

Send for Printed Matter.

Buckeye Paint & Varnish Co.
TOLEDO, OHIO

STANDARD HORSE NAIL CO.

NEW BRIGHTON, PA., U.S.A.

MANUFACTURE

A Full Line of Horse Nails

Send for Catalogue, Prices & Samples.

INTERCHANGEABLE
LOCK-CORNER SHELF BOXES
For the Hardware Trade.
THE A. H. GREEN CO.,
97-101 Warren St., NEW YORK.

LUFKIN Measuring Tapes

are made in every conceivable variety, to suit every purse and purpose, but all of the same superior quality.

¶ Our extensive advertising creates a demand, that every progressive dealer should be able to satisfy.

¶ It takes but a minute and a postal to ask for our catalog—it's more than worth while.

Please Mention The American Artisan

THE LUFKIN RULE CO. Saginaw, Mich., U. S. A.

New York London, Eng. Windsor, Ont.

DISSTON SAWS

Run Easiest
Cut Fastest
Last Longest

To the practical Saw User this tells the full story of HIGHEST PERFECTION in Material, Temper, Design and Workmanship attained for the DISSTON BRAND OF SAWS.

HENRY DISSTON & SONS, Inc.

Keystone Saw, Tool, Steel and File Works

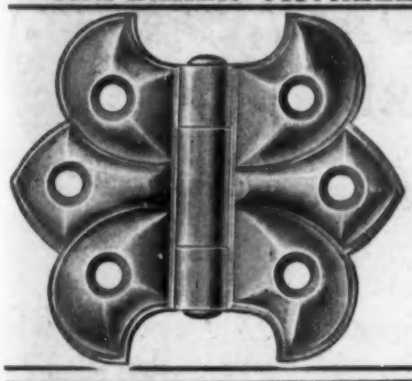
PHILADELPHIA, PA.

A NEW PATTERN STANDARD LEVEL—Two Level Glasses, One Plumb Glass

Side glasses may be reversed at any time; all easily adjustable; all glasses in plain view from both sides; brass trimmings on both sides.

No. 31—Solid Cherry.
No. 32—Three-piece Cherry.
No. 33—Solid Mahogany.

THE BAKER - McMILLEN COMPANY, Akron, Ohio.



STRAP and T HINGES—BUTT HINGES

Also a complete line of Shelf Brackets, Barn Door Hangers, Door Bolts, etc. Our wrought surface hinges are strong, massive and beautifully finished, and every one perfect. All Goods Guaranteed.

WRITE FOR COMPLETE CATALOG.

THE GRIFFIN MFG. CO. 1500 Cherry St., Erie, Pa.

YANKEE [All Steel] DAMPERS and CLIPS

FOR SMOKE PIPE AND FURNACE PIPE

THE S. M. HOWES COMPANY, 40-46 Union St., BOSTON

SIMMONS'

"Double Bottom" Handy Handle HODS

Mr. Dealer:

How much Profit do you make on Coal Hods?

You can make more on "Ours".

WHY?
BECAUSE—
"Double Bottom" GIVES OVER TWICE THE WEAR
AND
Wire-Bound TOP AND BOTTOM
STRONGEST WHERE MOST NEEDED
Patent Handle
STANDS UP BY ITSELF if you want it to stand up

You CAN'T AFFORD to be Without Prices. Write Us.

Address DIVISION 5

SIMMONS HARDWARE COMPANY
INCORPORATED

ST. LOUIS, MO. NEW YORK CITY.

Agate NICKEL-STEEL Ware

AGATE L&G Mfg. Co. NICKEL-STEEL WARE

is absolutely free from poisonous substance, is made by careful, experienced men, by a company founded in 1850. The first enameled ware and blue and white ware made in this country was made in our mills. We know how to make enameled ware safe and durable. We make it safe and durable because we are proud of the trade mark. Look for the blue label.

Lalance & Grosjean Mfg. Co.

Chicago New York Boston

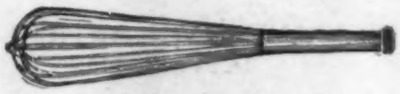
Hotels, Bakers, Confectioners and Household

WIRE GOODS

18th Century Quality **20th Century Ideas and Prices**

The jobbers and the large dealers in and around New York know of the high quality of this line of wire goods which is manufactured in my own factory. Some of them have been continuous customers for 16 years, and they have had practically a monopoly of the line.

The capacity of our factory has been doubled in the past year because the housewife has found the economy of paying a little more for a REAL EGG WHIP than for an imitation one, made of picture wire and tin; You will find a demand for this entire line if you will stock some of the goods and I mention below a few of the articles which are in ready demand.



FRENCH EGG WHIP
No. 1566

12-in.	14-in.	15-in.	16-in.	18-in.	20-in.
$2.25 per doz.	$3.00 per doz.	$3.38 per doz.	$3.75 per doz.	$4.50 per doz.	$6.00 per doz.

WRITE FOR DISCOUNTS.

FRENCH SALAD BASKET
No. 1569

6-in.	7-in.	8-in.	9-in.	10-in.	11-in.	12-in.
$7.50 per doz.	$9.00 per doz.	$12.00 per doz.	$13.50 per doz.	$16.50 per doz.	$18.75 per doz.	$21.50 per doz.

WRITE FOR DISCOUNTS.

INFANTS BOTTLE HOLDERS
No 1554

Holding 6 Bottles.	Holding 8 Bottles.	Holding 12 Bottles.
$7.50 per doz.	$8.25 per doz.	$9.75 per doz.

WRITE FOR DISCOUNTS.

Ask for catalogue of Wooden Ware, Household Goods and Alcohol Appliances for heating, lighting and cooking.

BOSTON, MASS.
James H. Turner,
93-95 Pearl Street

OTTO THURNAUER.

IMPORT MANUFACTURING **EXPORT**

310-318 SIXTH AVENUE,
NEW YORK,

JACKSON, MICH.
Reginald F. Fennell,
Carter Building

Mail Your Request TODAY

¶ Our complete Fall and Holiday catalogue—the most important issue of the year—is now ready for distribution.

¶ Readers of THE AMERICAN ARTISAN will do well to get their request in TODAY, to make sure they receive an early copy.

¶ This book will name net prices on a very extensive line of Hardware Specialties and the most complete line of Holiday Goods ever shown by any jobbing concern.

¶ Among the many special "features" is our $4.50-$9.00 Sale, giving competitionless "leaders" to retail at 50 cents and $1.00.

¶ See the goods on those sales alone. It is worth the cost of a trip to market.

¶ Our full line is now on display in EIGHT cities, where, as usual, every price is marked in plain figures.

¶ For your own interest, see our lines of special interest to hardware dealers, either in the catalogue or in one of our houses before committing yourself on your Fall wants.

¶ Our catalogue is mailed free to merchants who buy goods to sell again. Ask for No. MC681.

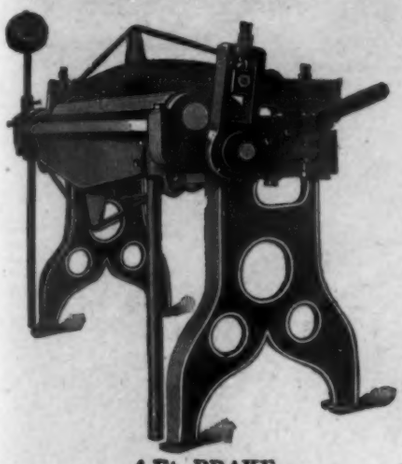
BUTLER BROTHERS

Wholesalers of General Merchandise

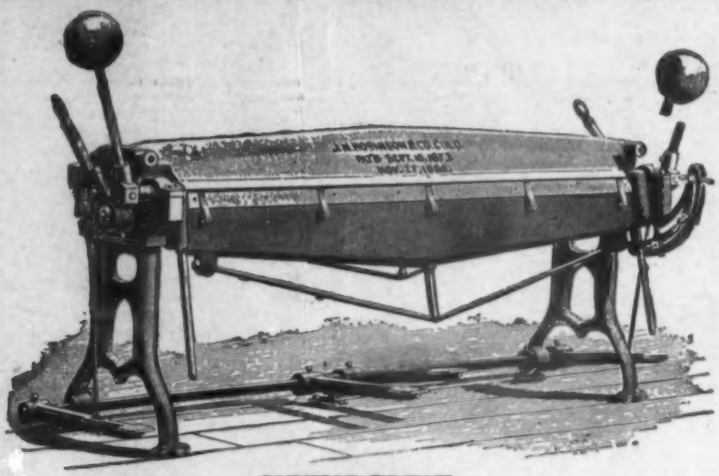
New York Chicago St. Louis Minneapolis

SAMPLE HOUSES:

Baltimore Dallas Omaha San Francisco



4 Ft. BRAKE
Capacity 12 Gauge.



CORNICE BREAK
Capacity, 20 Gauge and Lighter.

THE J. M. ROBINSON MFG. CO.

Manufacturers of Sheet Metal Working Machinery

3282 to 3288 Spring Grove Avenue **CINCINNATI, OHIO**

As the wind is to the sails, so is advertising to the sales.

An ad in THE AMERICAN ARTISAN will bring sales.

DRIVE THESE TANDEM!

"Enterprise" Meat Choppers and

"Enterprise" Sausage Stuffers and Lard Presses

Every user of an **"Enterprise" Sausage Stuffer and Lard Press** needs an **"Enterprise" Meat Chopper.** Sell them together. Push them together. Drive them "tandem."

Every dealer, and almost every buyer, knows the superiority of genuine "Enterprise" Choppers.

Lest you forget, we remind you of these points about the **"Enterprise" Sausage Stuffer and Lard Press:**

Accurately-bored cylinder. Lips on the inner tin cylinder to make easy its handling when heated. No hot iron cylinder to handle when pressing lard. A patent latch which prevents breaking of plates. Patent corrugated spout prevents air entering the casing, thus assuring preservation of sausage.

Write for catalogue describing, illustrating and listing these and other "Enterprise" specialties. Get our advertising aids for dealers.

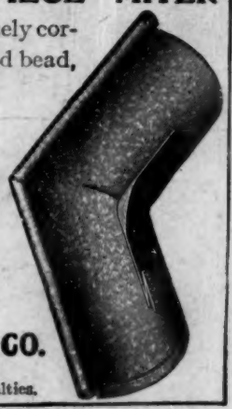
The Enterprise Mfg. Co. of Pa.

Philadelphia, U. S. A.

21 Murray Street, New York **438 Market Street, San Francisco**

THE IMPROVED ONE-PIECE MITER

This miter is made absolutely correct, true to shape, size, and bead, and the easiest connecting slip joint. Will save your time and temper. In case your supply house cannot furnish them, send your order direct to the



J. E. WHITACRE MFG. CO.
ROCKFORD, ILL.
Manufacturers of Sheet Metal Specialties.

"The 'GLOBE' is built on honor and sold on merit"

The "GLOBE" Ventilator

in COPPER, GALVANIZED IRON and with Glass Tops for Skylight purposes.

ABSOLUTELY STORM PROOF

For Perfectly Ventilating Schools, Churches, Halls, Mills, Factory and Audience Rooms of Every Character

SMOKY CHIMNEYS CURED

"GLOBE VENTILATED RIDGING"

Send for Pamphlet

MANUFACTURED BY

GLOBE VENTILATOR CO., Troy, N. Y.

STAY-IN Flue Stoppers

are **guaranteed** to be absolutely soot proof. Cannot be jarred or blown from the flue hole.

Finished in Brass and Nicely Decorated

MANUFACTURED BY

STUBER & KUCK, Peoria, Ill.

We Also Manufacture PIECED TINWARE and All Styles of FLOUR SIFTERS

A GOOD BUILDING
IS WORTH
A GOOD ROOF

Owners, Architects and Tinners All Agree and Say:

DON'T TAKE CHANCES. GET THE BEST

SCOTT'S EXTRA COATED
HAMMERED OPEN HEARTH
ROOFING TIN

Made under well tried successful methods by EXPERT WORKMEN UNDER EXPERT SUPERVISION

WE ARE IN COMPLETE CONTROL
of every operation in the process from our own HAMMERED OPEN HEARTH DEPARTMENT TO OUR OWN TINNING HOUSE

Follansbee Brothers Co.

Makers and Sellers of HIGH GRADE TIN and TERNE PLATES

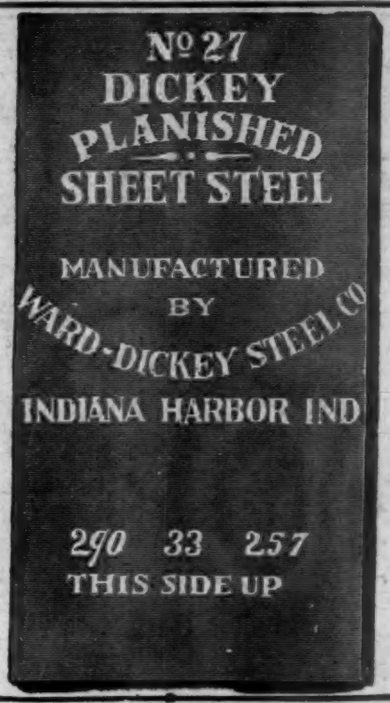
DEALERS IN TINNERS' SUPPLIES

PITTSBURGH

LOUISVILLE, BUFFALO, MEMPHIS, CLEVELAND, MILWAUKEE, INDIANAPOLIS, NORFOLK, ROCHESTER, NASHVILLE, DETROIT, NEW YORK

Southwestern Distributors, Stockhoff Supply Co., St. Louis.

☞ Write to Nearest Warehouse



STANDARD SHEET STEEL

DICKEY Planished Sheet Steel is the acme of sheet steel excellence; making a standard by which inferior grades are classified.

DICKEY Steel is made from special analysis basic open hearth steel.

It is finished under powerful Planishing Hammers.

For protection we pack all DICKEY Steel in metal cases, for which no charge is made.

If not satisfied with the sheet steel you are using let us send our circular and show you a better way—our way.

SEASONABLE AND SALABLE
THIS IS THE SEASON FOR
Preserving Kettles

And we are in a position to supply the trade with the best designed Preserving Kettles on the market.

Our goods are first-class and sell at reasonable and popular prices.

We manufacture and can supply all the staple items in enameled ware.

OUR LINE CONSISTS OF OVER 500 FAST SELLING ITEMS

Star ★ Enameling & Stamping Co., PITTSBURGH, PA.

This Space for Sale.
Inquire of Daniel Stern,
355 Dearborn St., Chicago

DO YOU SELL BOLTS & SCREWS?

Then why on earth don't you **supplement** your stock with **Star Expansion Shields** and realize on those inquiries for the

We Make All Kinds—All Sizes From ⅛" to 2" Diam.
Catalog and Samples on Request

STAR EXPANSION BOLT CO., Bavonne, N. J.

Eastlake Metal Shingles

The Roofing with a Reputation

Have been on buildings *twenty* years, and are still in good condition.

Write for Catalogue and Prices.

The W. J. BURTON CO.

DETROIT, MICH.

THE "CENTENNIAL"
RAIN-WATER CUT-OFF

The strongest, most durable and cheapest CUT-OFF on the market.

The only single cut off made to fit **Corrugated** and plain pipe and which can be used without extra pipe or elbows. For sale by all leading jobbers.

Manufactured only by

The Sullivan-Geiger Co.

19 and 21 East South Street, Indianapolis, Ind.